



# A GUIDE TO THE CAMBRIDGE PLAN

by

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# Published by

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#### PRODUCTION

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This booklet has been written at the request of the County Planning Committee in order to tell the story of the Cambridge Plan in non-technical words. The author is Mr. Derek Senior, the local government correspondent of the Manchester Guardian. He is not a professional Town Planner; he is a professional writer. He has written this booklet describing the Cambridge problem as seen by a well-informed onlooker standing apart from the heat of local controversy. What he here writes are his own opinions and not necessarily those of the Planning Committee as a whole or of its members individually.

#### CHAPTER I

This is not a summary, nor is it a critique; it is a guide. It does not attempt to catalogue all the individual proposals made in the Cambridge Plan, or presume to assess their merits. Its purpose is simply to expound the Plan - its background, its principles, the needs it tries to meet, and how each of its main proposals fits into the general picture - so that you may see it in perspective and see it whole.

If you want to know how the Plan affects a particular piece of land in which you happen to be interested, or to find out how much development of a particular kind is intended, and where and when it is likely to take place, then you should consult the statutory documents - the Written Statement and the Town Maps, as they are called - which the Minister of Housing and Local Government has officially approved. You will find the Statement a bit stark, and the Maps a bit confusing. That cannot be helped. There are good technical reasons why they should take the form they do, and the staff of the County Planning Department will always be glad to interpret them for you.

But if you are interested in the Plan as a citizen, as a member of the University, or as one of the thousands of people all over the world who know and love Cambridge, then you will find these documents by themselves of little use. They will not tell you what the Plan is all about, or explain how one proposal is related to the rest. The County Planning Department has also issued reports and written analyses of the surveys on which the Plan was based - and these in turn make frequent reference to the earlier report of the planning consultants, Sir William Holford and Professor H. Myles Wright. But even if you had time to peruse and collate all these publications you might well, in the end, find it hard to see the wood for the trees.

In this booklet I have tried to show you the wood as a wood. Since it is not a statutory document it can concentrate on essentials, both in text and in diagrams. When you have read it you will, I hope, be able to see the Plan in the round, to appreciate the problems which its authors had to solve, and so to reach your own informed and independent judgment as to how well they have discharged their task.

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Before we begin, however, let us get clear in our minds what a development plan is.

In the first place, it is not a dream of perfection; it is a scheme of practicable improvement. The planners take as their starting-point the city as it

is, find out what they can about its functions and fabric, diagnose its defects, consider its needs, decide how the defects can best be remedied and the needs met, and then estimate what progress can be made in these directions in the course of the next five years and the following fifteen, given the resources normally available for such purposes.

It follows that a development plan is essentially a compromise - between what we have and what we should like; between conflicting claims on the same land, labour and materials; between incompatible ideals and between differing scales of value. The test of a good plan can never be whether it completely solves one problem, fully meets one need, or wholly satisfies one claim, regardless of other problems, needs and claims. The test must always be whether a different compromise would yield a better total result for the same expenditure of time and resources.

It follows also that it is meaningless to talk of the "cost" of a plan in money terms. Plan or no plan, money will go on being spent on development, and with no plan - or a bad plan - much of it would be wasted. The Cambridge Plan does not seek to prescribe how much development ought to be undertaken; it simply tries to estimate how much development of one kind or another will in any case take place in Cambridge during the next twenty years, and indicates the forms in which the planners think it would yield the best value for the money.

In the second place, a plan is not a blueprint or working drawing, but a statement of policy. Its submission by the planning authority and its approval by the Minister do not necessarily imply a final decision that the proposals it contains shall be carried out. They mean that, as far as can be seen at the time, the developments proposed appear to the authority and the Minister to represent the best use of the resources likely to be available, and that the authority and the Minister will accordingly do what they can to promote such developments, and to prevent them from being hindered or made needlessly expensive - unless and until it becomes apparent that the public interest demands an amendment of the plan. Specifically, the planning authority will be guided by the plan in carrying out such developments as fall within its province (e.g. the building of schools), and will expect other public authorities, national and local, to do likewise; and permission for private developments will normally be granted if they conform with the plan and refused if they do not. But any development involving Ministerial loan sanction or the compulsory purchase of land will still have to pass the usual form of scrutiny; the fact that it forms part of an approved development plan carries no exemption.

Thus the Minister's approval of a new highway proposal does not confer any authority for the actual construction of the road. It merely signifies the Minister's decision that a case has been made out for preventing any development that would make its construction (if and when authorised) more difficult, expensive and disturbing to property owners than it need be. This implies that the Minister agrees with the planning authority's view that the road will probably be necessary, that the route chosen seems to be the best that can be found, and that for the time being nobody should be allowed to erect valuable buildings in such positions that they would have to be demolished if and when the road was built.

Conversely, the fact that a highway proposal has been omitted or excluded from the plan does not necessarily mean that there is no intention to build such a road. It may only mean that the land over which it would pass is so unlikely to be used for building that there is no present need to take preventive action.

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Since 1947, when the Town and Country Planning Act deprived non-county boroughs of their planning powers, the planning authority for Cambridge has been the Cambridgeshire County Council. What is here called the Cambridge Plan is, in fact, the central part of the County of Cambridge Plan - though the city and its suburbs have, of course, been surveyed and planned in much greater detail than its rural hinterland.

Before 1947 the Borough of Cambridge (it was not yet a City) had been preparing a plan of its own. One of its major features was a proposal to widen part of the congested "spine" road that cuts almost straight across the city from north-west to south-east. The Minister of Town and Country Planning suggested that a planning consultant be appointed to make a more thorough investigation of Cambridge's special needs, and the Borough Council decided to entrust this task to Professor (now Sir William) Holford. When the County Council took over the Borough's planning functions under the 1947 Act, it renewed Professor Holford's Three years later he and his partner, Mr. H. Myles Wright, commission. presented their report. They advised against the widening of the spine road on the grounds that it would do little to relieve traffic congestion and that it would entail disproportionate sacrifices. The statutory Development Plan later prepared by the County Planning Officer, Mr. W.L. Waide, after exhaustive consultations with the City Corporation, the University and other interested bodies, was closely based, so far as the city was concerned, on the consultants' recommendations, and included their alternative proposal for a spine relief road. This was the main count on which objections to the Plan were argued, notably by the City Corporation, the University and most of the colleges, at the ensuing public inquiry.

It was this bone of contention that made the Cambridge Plan a topic of prolonged, heated, and often ill-informed discussion in the national press and elsewhere. Fortunately it is no part of my task to weigh the pros and cons of this controversy, but there are three underlying factors which should, I think, be brought to the attention of every reader who wants to form an independent assessment of the merits of the Plan.

One is that the attitude of the City Corporation (as its Mayor, Alderman E.T. Halnan, told the 1955 Town and Country Planning Summer School in Cambridge) was "conditioned to some extent by the fact that its planning powers had been transferred to the County". That was natural, inevitable, and even, in a sense, commendable. The Corporation had taken, and still took, a lively interest in the future direction of the city's development; it had enjoyed planning powers, felt it had a better right to keep them than several smaller towns which happened to be county boroughs, and knew it might well regain them as soon as the promised reorganisation of local government took place. It could hardly be

expected to welcome any proposal, coming from the beneficiaries of its loss, which added insult to injury by differing so radically from its own.

The same attitude of mind found expression elsewhere. The Manchester Guardian, for example, said in a leading article:-

"The issue in the dispute about the Cambridge Plan... is clear. If part of a county development plan really concerns one district only within a county, and if local opinion in that district strongly objects to that part of the plan, ought the Minister of Housing and Local Government to uphold the objection?"

Both the City and its sympathisers, in fact, were objecting not so much to the Plan as to the transfer of powers under the 1947 Planning Act; they were visiting upon the Cambridgeshire County Council the resentment provoked five years before by Parliament. Should any reader be disposed to follow their example, let him first reflect that the County Council had been saddled willy-nilly with the statutory duty to produce what it considered the best solution to the city's traffic problem, and could have no motive for discarding the City's solution except\* the conviction that it would not work. Let him also ask himself whether he would take an equally unfavourable view of the County's proposal if it had been recommended to, and approved by, the City Corporation instead.

Whether the Cambridge Corporation should or should not remain the planning authority for the city was in 1947 an arguable question, and one which only Parliament could decide. But when Parliament's decision had been made, the duly constituted planning authority would clearly have failed in its statutory duty if it had left unsolved a problem which it knew to be serious and urgent, or adopted a remedy which it was convinced would not work, merely because one or other of these courses might have been more popular with the City Corporation or the University.

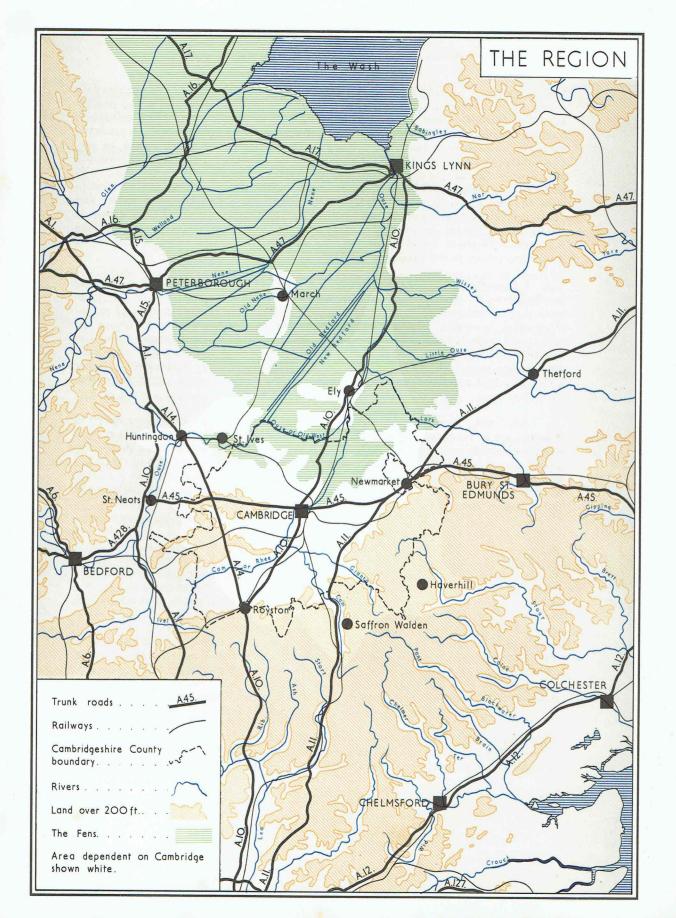
The second consideration to be kept in view when pondering the opposition to the Cambridge Plan is that the University is a very loosely federated structure. Every don's first loyalty is to his college. Indeed, the principle of college autonomy is so jealously guarded that any threat to sacrifice the interests of one college to those of the University as a whole brings other colleges rallying to the victim's support. That most (not all) of the colleges objected to the spine relief road should not, therefore, be regarded as conclusive evidence that they considered it a bad proposal from the University's point of view. It should also be remembered that both colleges and University, having no responsibility for the solution of traffic problems, are free to propose that their consideration be deferred, to urge that they be left to solve themselves, or even to deny their existence, if no painless cure can be found. But a planning authority - as the Minister has had occasion to remind the Oxford City Council - is not.

The third point that should be borne in mind (but is often overlooked) is that a great deal of the land in and around Cambridge is owned by the University and colleges. Moreover, a substantial proportion of it is land which they do not

themselves use, or hold for possible future use, but which they have acquired as a source of revenue. Their present wealth is due in large part to the profits accruing from the past development of this land for all sorts of non-academic purposes - and that development has sometimes taken forms which no planning authority would now tolerate. They have therefore as much cause as any speculative builder to resent the passing of the 1947 Planning Act, simply because it limits their freedom to "do as they please with their own". In formulating their attitude to any plan made under this Act, they are entitled to take account not only of its bearing on the life of the University as a whole, and of its impact (if any) on their own grounds and buildings, but also of the extent to which it may hinder the efforts of their estates bursars to maintain and improve the amenities their members enjoy, by limiting the scope and profitability of their operations in the property market.

I hope these cautionary observations will not be misinterpreted. It is not my business to champion the Cambridge Plan against its critics, but simply to help you to understand it. What you think of it then is no concern of mine. Prejudice, however, can be a barrier to understanding, and I cannot ignore the fact that many who read this booklet will know little beforehand about the Cambridge Plan except that it seems to have had a critical reception; they may not realise that both its authors and their consultants have (regrettably, in my view) thought it improper for them to answer the polemics of its highly articulate opponents.

All I ask, therefore, is - first, that you should make a conscious effort to dismiss, or at least to suspend, the preconceptions induced by the apparent one-sidedness of this controversy; secondly, that you should guard against letting any dislike for the 1947 Planning Act colour your judgment of the merits of the Plan; and thirdly, that if you approve the purposes of the Plan you should not condemn its proposals, however unpalatable you find the sacrifices they entail, unless you can see less damaging ways of achieving the same ends.



## CHAPTER II

One unquestionable benefit conferred by the 1947 Planning Act was that it enabled Cambridge to be planned in relation to its suburban setting and its rural hinterland. It would, of course, have been much better still if the Act had associated the planning of Cambridge with that of its whole service area - the area, that is to say, whose inhabitants go to Cambridge rather than to another town of comparable size (such as Bedford or Peterborough) to see a play, buy a piano, or use any of the specialised facilities that only a sizeable town can provide.

The Cambridge region can be variously defined. As a University, of course, Cambridge has a catchment area of more than national scope. As a regional headquarters for central government administration it serves some three million people living in an area such as only Whitehall would think of calling a region. Geographically speaking, it is the natural capital for about half this area - a region embracing most of the East Anglian plateau and the Great Ouse basin, and the greater part of this area comes within the sphere of its commercial influence. But its service area (which might be called the Cambridge sub-region) is only about thirty miles square. This, the proper unit for planning purposes, comprises the city, the ring of half a dozen market towns about fifteen miles away from it (each with a population of between five and ten thousand), and the countryside around them.

The actual planning area covers most of the rural part of this natural community, but its boundary goes out of its way to exclude all the market towns. It is, in fact, the only administrative county in England in which there is no town but the county town. More than half the total population of some 170,000 is concentrated in the city of Cambridge and its suburbs: the rest is scattered in small villages - wherever the ground is firm and water available - on the rich fenland to the north, on the chalk country rising to the escarpment of the East Anglian Downs to the south and east, and on the heavy clay of the western plateau.

This complete lack of intermediate centres leaves the villagers more dependent than those of any other county on their county town, and makes it especially important that the planning of that town should take full account of rural needs.

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Cambridge came into existence as a centre of communications, standing as it does at the point where the main route from the Midlands to East Anglia, passing between the chalk escarpment and the Fens, crosses the river Cam, and where

several tributary valleys converge. As a university and market town, and later as a railway junction, it grew steadily until in 1851 its population stood at 27,000; that of the rest of the county, increasing at a similar rate, had then reached 87,000. Thereafter, however, the remoter parishes dwindled as fast as those nearest Cambridge grew, while Cambridge itself forged ahead, trebling its population in a hundred years. In the last quarter of that period, moreover, the city's rate of growth accelerated: by 1948 it was expanding faster than the average English town. Its population (including undergraduates) was then over 86,000 and exceeded that of the rest of the county.

In this significant development changes in birth and death rates played little part. Cambridge itself had more than its share of people who had passed child-bearing age, and the increase in its native-born population was negligible. The overwhelmingly dominant factor was the movement of people, at the rate of roughly a thousand a year, into Cambridge and into dormitory estates in the neighbouring villages. Some of these immigrants came from outlying parts of the county, but most of them from beyond its boundaries. A small part (about 3,000) of this influx was accounted for by the further expansion of the University, and rather more of it by the establishment in Cambridge of Government offices with 1,500 jobs to fill. But the bulk of it came in response to the labour demands of newly established factories.

Manufacturing industry was not entirely foreign to Cambridgeshire. Chivers had started their jamming and fruit-preserving plant at Histon, just north of the city, in 1873. But up to the First World War industrial development was small in scale and relatively insignificant; it was on the University that the city still chiefly depended for its livelihood. In the period 1931 to 1948, however, five of the city's industrial concerns took on as many additional workers as there were people employed by the University and its colleges. By 1948 there were three industrial operatives and two civil or local government servants for every one person in University or college employment. It was no longer the University whose growth set the pace for the city's expansion. Industry had quietly moved in and taken control. Cambridge, in short, was in imminent danger of waking up to find itself swamped by a second Cowley - but with this difference: the planning authority had been armed with the power to call a halt before it was too late to save Cambridge from the fate of Oxford.

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This was the situation in 1948 when the Cambridgeshire County Council became the planning authority and took over the City's consultants. They began with an exhaustive study of existing conditions in the city. The first object of such a survey is to find out what the city's present functions are. In the light of that knowledge, they had then to consider what its future functions ought to be. And the first principle that emerged from their survey was this:-

THAT CAMBRIDGE SHOULD REMAIN PREDOMINANTLY A UNIVERSITY TOWN.

Nothing very original or remarkable about that, you may think. Yet in

fact this decision is the key to the whole Plan. Once taken, it determined the way in which all the city's major planning problems should be tackled. Any other decision would have been bound to result in quite a different kind of plan. It meant that the needs of Cambridge as a university town should take precedence wherever they conflicted with its needs as a market, as a shopping centre, as a railway junction, as a county town, as a regional headquarters for commerce and public administration, or as a hive of manufacturing industry. In confirming this decision, the planning authority freely committed itself to a basic act of policy. It could have chosen otherwise if it had seen fit to do so, but, having chosen, it was obliged to accept the logical implications of its choice.

The most obvious and important implication was that a limit must be set to the further growth of the population of Cambridge. On this point, more than any other, the consultants were emphatically positive. "It is impossible", they declared, "to make a good expanding plan for Cambridge". A plan could, of course, have been prepared on the basis that the city's expansion should be allowed to go on unchecked; but it could not, in the consultants' view, have been a good plan, and it certainly could not have retained the traditional character of Cambridge as a university town.

There are many clear and cogent reasons why this should be so. A large growth would directly hinder the work of the University by making social contacts more difficult, by increasing noise and the time spent in getting from building to building, by intensifying competition for good building sites and compelling the use of the less distant playing-fields for building. It would force up the demand for floor-space in the city centre (which is hemmed in by a tight ring of colleges), and thus force up the height of shop and office blocks till they overtopped the University and college buildings. It would also compel the widening of the centre's narrow streets and the destruction of their intimate charm. Further, it would lead to the overcrowding and wearing out of central green spaces, push the open countryside further away, and deprive many workers of the inestimable luxury of being able to cycle home (to a house with a garden) for their midday meal. And with all these drawbacks would come no compensating advantage, for Cambridge already offers an ample range of employment and already possesses most of the amenities and services of a major regional capital.

"We believe", wrote the consultants, "that Cambridge is moving quickly towards a new phase of its existence... We believe that it is very likely, unless preventive measures can be agreed and carried out, that Cambridge will grow rapidly, and that if this happens the average citizen of Cambridge will gain nothing and lose a great deal... We recommend that the (Planning) Committee should try to reduce the rate at which Cambridge is growing and to reach a stable population at some level not much in excess of present figures. We suggest 100,000 as the ultimate ceiling for the borough - to be reached as slowly as possible - and 120,000 or 125,000 for the larger area of Urban Cambridge (including the adjacent dormitory areas). We believe that if this could be done the present character and fine qualities of Cambridge could be retained and that most of its defects could be remedied within twenty or thirty years".

The County Council accordingly resolved, as the second major principle of its Plan:-

TO REDUCE THE RATE AT WHICH THE CITY IS GROWING AND TO STABILISE THE POPULATION WITHIN THE TOWN MAP AREA (roughly equivalent to the area of the City) AT NOT MORE THAN ABOUT 100,000 PERSONS.

This figure includes undergraduates, and is not a target but an upper limit: if stabilisation at a lower level should prove feasible, so much the better.

This was no light undertaking; indeed, it had never before been tried. How was it to be done? Here again the answer was plain, if not easy. Natural increase was unlikely to add more than a few hundreds to the city's population; soon, indeed, deaths would probably begin to outnumber births. The University would probably go on expanding, bringing in more undergraduates and research students, and employing larger teaching, service and maintenance staffs; but this expansion would be gradual and relatively small, and the Plan's first principle demanded that it be encouraged rather than limited. The danger of runaway growth came from one cause only - immigration. And what attracted immigrants (apart from a few old people who retire to Cambridge because it is such a nice place to live in) was the prospect of good, safe jobs. "The impulse towards growth", as the consultants put it, "is just the sum of individual shortages of labour." So long as Cambridge's capacity to employ went on increasing, nothing could stop its population from growing. Even if it were possible to bring house-building to a dead stop, the only effect would be a progressively more serious overcrowding of existing houses. If the Plan were to succeed in its basic purpose it must provide for effective control of the number of jobs the city had to offer.

Some strengthening of Cambridge's magnetic attraction for job-seekers may come from a boom in catering for tourists, from an expansion of the city's commerce and service trades to meet the demands of growing populations (and rising prosperity) elsewhere in the Cambridge sub-region, or from a rise in the establishments of the Government's regional offices. But such increases in employing capacity are in their nature marginal. Each must be related in scale to the present size of the service concerned. Even in combination they can hardly threaten to swell the population of Cambridge at a rate or to an extent that might imperil its character as a university town. That danger springs solely from the quite unlimited expansion potential of industry - especially of large-scale mass-production units.

Cambridge escaped the first industrial revolution. The second came late and took the city by surprise. During the last war it established a beachhead, and the advance guard of immigrant workers poured in. But the real mass invasion had not yet got under way. Employment in manufacturing industry had risen suddenly and out of all proportion to other occupations, but the level it had reached in the city was still barely half way up to the national average. There was boundless scope for further expansion. By 1948 there were some 2,500 vacancies: all the newly established industries were flourishing and bent on

extending their works as soon as these jobs were filled and more workers could be brought in; and if the labour needs of these industries could have been for the moment satisfied there were always other firms waiting for a chance to come in and keep up the demand for an ever greater influx of workers.

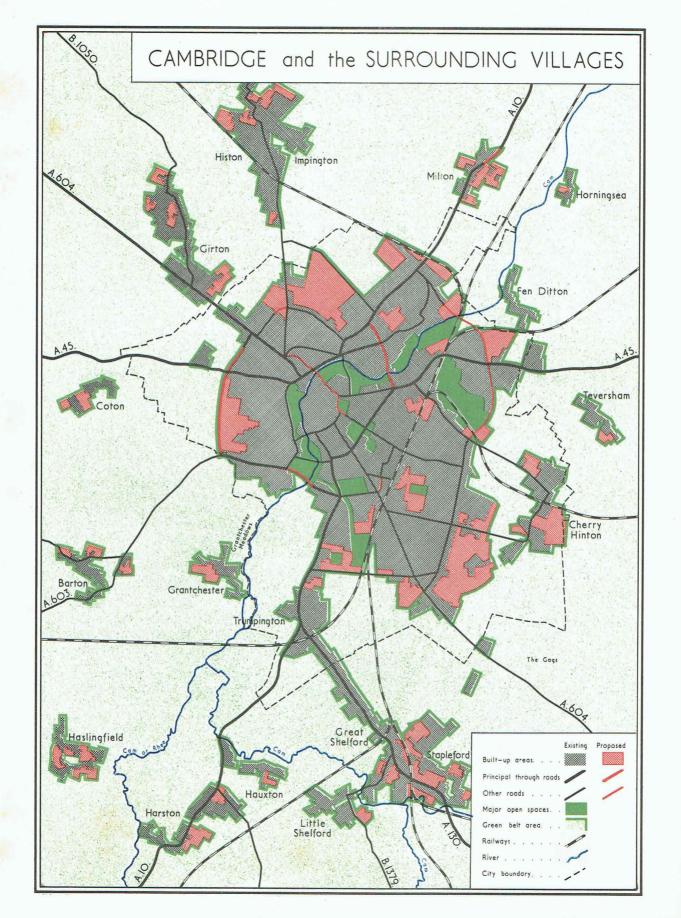
Thus the problem of reducing the rate of the city's growth, so that it might remain predominantly a university town, resolved itself quite simply into the problem of damping down the impetus towards all-out industrialisation.

In some cases, of course, there are good economic and technical reasons why industrialists seek sites in or near Cambridge. Some are attracted by the London market, but prevented by planning and licensing controls from building factories any nearer to it. Many modern industries - notably chemicals, scientific instruments, radio and television - find distinct advantages in close contact with the research laboratories of a great university with a growing But those advantages apply only to the comparatively small scientific bias. departments of such industries in which prototypes of new products are designed and new uses for old ones developed. The departments in which much larger numbers of workers mass-produce these products have no necessary link with the University. Of all employers of labour and users of land, indeed, massproduction units have the least legitimate claim to be sited in or near Cambridge - more particularly since virtually all their raw materials have to be They can do their job just as well if they are kept outside the brought in. county altogether.

The exclusion of all large (or potentially large) new manufacturing industries must therefore be the first practical step in a policy aimed at keeping Cambridge from becoming too big to maintain its character as a university town. Established industries can be allowed to expand on a modest scale, but sizeable extensions must take place elsewhere. If these off-shoots, and the appropriate departments of new industries, are light in character and genuinely need to be within easy reach of the University, they can be sited in the larger Cambridgeshire villages - like Sawston - or in the small towns just outside the county, which would gain as much as the city would lose from increases in employment capacity. Otherwise they must go further afield.

It rests with other planning authorities and with the Government to complement this negative aspect of Cambridge's industrial location policy with positive provisions to attract the industries concerned to the places where their presence will do the most good. Meanwhile the Cambridgeshire County Council has done its part by resolving, as the third major principle of its Plan:

TO LIMIT INDUSTRIAL EXPANSION IN AND NEAR CAMBRIDGE AND TO DISCOURAGE THE ESTABLISHMENT OF LARGE INDUSTRIES OF THE MASS-PRODUCTION TYPE WITHIN THE COUNTY.



#### CHAPTER III

The exclusion of new mass-production industries, however, is only the indispensable first step. It makes the problem of the physical growth of Cambridge soluble, but is not in itself a complete solution. Immigration will continue, in response to the demands of other forms of employment, on a considerable scale. None of these other occupations has the boundless expansibility of large-scale manufacturing, but between them - if each expanded to its utmost - they might in twenty years increase the population dependent on Cambridge for its livelihood by anything up to 21,000.

Even this limited increase is more than the city itself can accommodate without suffering an appreciable loss of those small-town virtues which, in combination with its big-town services, make Cambridge uniquely agreeable as a place to live in. There is no other town in England whose citizens enjoy the same standard of urban life, have as much garden space, and yet can get to work, to spacious commons and even to the open country in a few minutes. If another 21,000 people were added to its population it would be necessary to let the city sprawl over another couple of square miles of countryside, to build over its open spaces, or to deprive half its families of usable gardens.

It was therefore decided that less than two-thirds of the potential increase in population should be housed by extending, rounding off and filling in the builtup area of the city. The planning authority drew a line - a sort of invisible town fence - round Cambridge, with enough vacant land inside it to house another 3, 300 families (besides those already there who were still in need of homes) and to provide all the necessary schools, playing-fields and so on, with a little to spare for the sake of flexibility and freedom to choose between sites. This line - since strengthened by the designation of the land beyond it as a green belt - follows the provisional boundary recommended by the consultants; it excludes from development such valuable green wedges as the Grantchester Meadows and the foothills of the Gogs. In future nobody will be allowed to build in the green belt unless they can show quite irresistible reasons why they should. The only exceptions will be (1) University development on the site of the wartime Sebro factory on Madingley Road, whose heavy concrete foundations are in any case immovable; and (2) a housing site north of the Arbury Road, to be held as a contingent reserve.

What, then, of the remaining third or more of the people who may find their livelihood in Cambridge during the next twenty years? Left to themselves, most of them would probably seek houses not in the city itself but in the nearest villages, as many of their predecessors have done. Girton, Great Shelford and the Histon-Impington area have, in fact, become predominantly dormitories for bread-winners whose income is earned in Cambridge. These

areas would lose nothing they have not already lost, and could support better local shops and services, if they grew somewhat larger still. Fulbourn, Milton and Harston would also benefit from small increases. All these districts have main drainage (except Harston) and other utility services, are well placed for quick travelling to and from Cambridge, and can offer plenty of sites suitable for building without serious loss to agriculture. The fourth major proposal of the Cambridge Plan, therefore, is:-

TO ACCELERATE THE DEVELOPMENT OF VILLAGES SURROUNDING CAMBRIDGE TO ACCOMMODATE AN ADDITIONAL POPULATION UP TO APPROXIMATELY 7,500 PERSONS.

Positive action in this sense will not only relieve the pressure of immigration on Cambridge itself, but will also help to protect Grantchester and those villages to the west of Cambridge that still retain their rural character. Moreover, it will prevent a recurrence of the worst feature of prewar building in these parts - the tendency for new houses to follow the line of least resistance along the main roads linking the villages with the city.

This ribbon development is "as long, continuous and unfortunate as can be found in any town of the size of Cambridge", says the consultants' report. "With one gap the built-up area now extends, one ribbon wide at least, for  $8\frac{1}{2}$  miles from north to south. This is a tremendous and most wasteful straggle". Ribbon development saved the private builder the trouble of providing service roads, but at vastly greater cost to the community in the form of inconvenience, expensive servicing, road accidents, traffic congestion, loss of farm output and sheer ugliness. Now each village, like the city, has an "urban fence" drawn round it; building will take place only on the "back" land within these boundaries, filling in and rounding off the spidery pattern of existing development, and the green gaps that still separate the villages from one another and from the city will be strictly preserved.

In the remoter parts of the county, no substantial development is expected, except at Sawston, which is now being discussed as a possible reception area for overspill from Greater London, and could accommodate some 5,000 persons. The rural population is unlikely to increase during the twenty-year period of the Plan by more than about 1,500. In planning for this increase the County Council has adopted two more major principles:-

TO SAFEGUARD THE INTERESTS OF AGRICULTURE AND TO PROVIDE IMPROVED CONDITIONS FOR THE AGRICULTURAL POPULATION;

and

TO ENCOURAGE THE DEVELOPMENT OF THOSE LARGER VILLAGES WHICH ARE ON GOOD LINES OF COMMUNICATION AND WHICH FORM SUITABLE CENTRES FOR THE SURROUNDING RURAL AREA.

These principles, however, are beyond the scope of this guide. They are mentioned here merely to complete in outline the general picture of future development in the county, so that the Plan for the city may be seen in proper perspective.

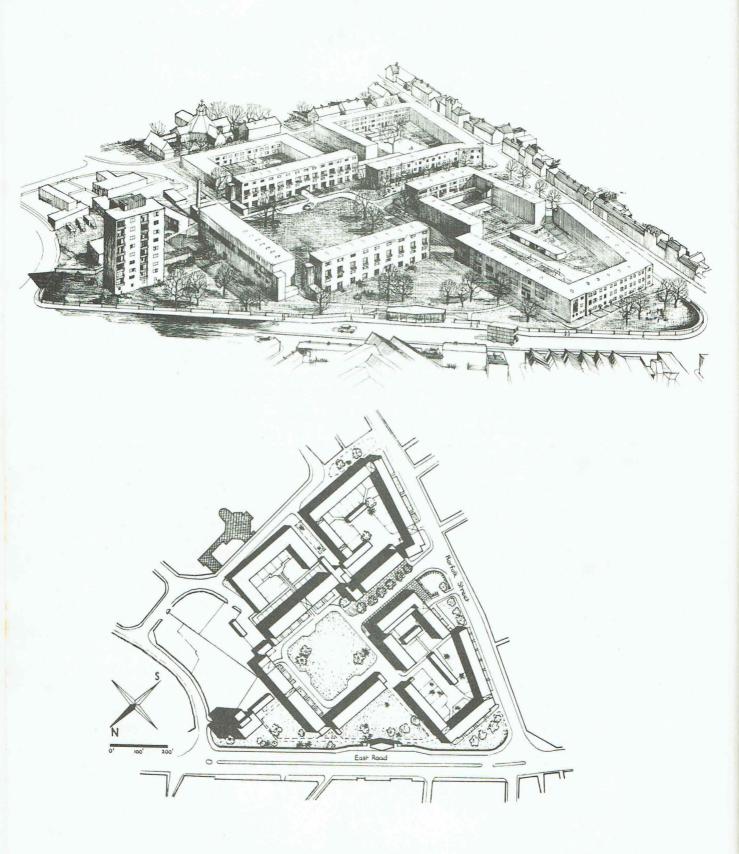
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To return to Cambridge. Here the Plan must provide not only for the housing of the people who now have to share dwellings or live in overcrowded conditions, and of a limited number of newcomers, but also for the rehousing of those whose present homes are (or soon will be) unfit to live in. This is not simply a matter of counting heads and allocating acres, because the unfit houses are not evenly distributed. In order to grasp the real nature of the problem, and to see how it ought to be tackled, we must first take a look at the city's anatomy.

Cambridge has grown lop-sidedly around a central core of academic and commercial buildings. Its backbone is an almost straight road (A.604) running roughly north-west and south-east through this central core. Most of the early expansion of Cambridge took place to the east of the centre, in the East Road district, and most of its later expansion spread in widening semicircles (with the spine road as their base) around this nucleus. The result is that four-fifths of Cambridge's present inhabitants live to the east of the spine road, and that the oldest and most closely built dwellings are concentrated immediately to the east, south-east and north of the University and business centre, while to the west lie most of the University and college grounds, with the more spacious of the modern residential districts beyond them.

As more and more housing estates were added on the city's eastern and northern outskirts, more and more space was needed for shops, offices, warehouses, cinemas, garages, laundries, cafés, builders' yards and all the other hundreds of service trades. They overflowed eastward from the business centre and seeped into the inner housing areas, trickling along the main streets and forming little pools here and there between them. For the most part they took over and adapted existing houses, bringing noise and smells and traffic to the doorsteps of their neighbours. Those residents who could afford to do so moved out to the better houses with larger gardens and modern amenities in the quiet, open suburbs, leaving behind only the poorer people who could not afford to move, or even to pay enough rent to keep old houses in good repair. So neglect, coming on top of age, inconvenience and unpleasant surroundings, set off the cumulative process of degeneration which is known to the planner as "blight" - a process whose only natural end is slumdom, and for which the only cure is comprehensive redevelopment.

Comprehensive redevelopment means demolishing all the buildings (except those of outstanding architectural or historic value) in a sizeable area and laying out a fresh pattern of streets and open spaces, so as to form sites convenient in size, shape and situation for new buildings of the kinds that are most needed in that area. When a district is going downhill it is no use waiting till one building after another falls down or becomes unusable and then replacing it with a new one, because nobody is willing to pay an adequate rent or purchase



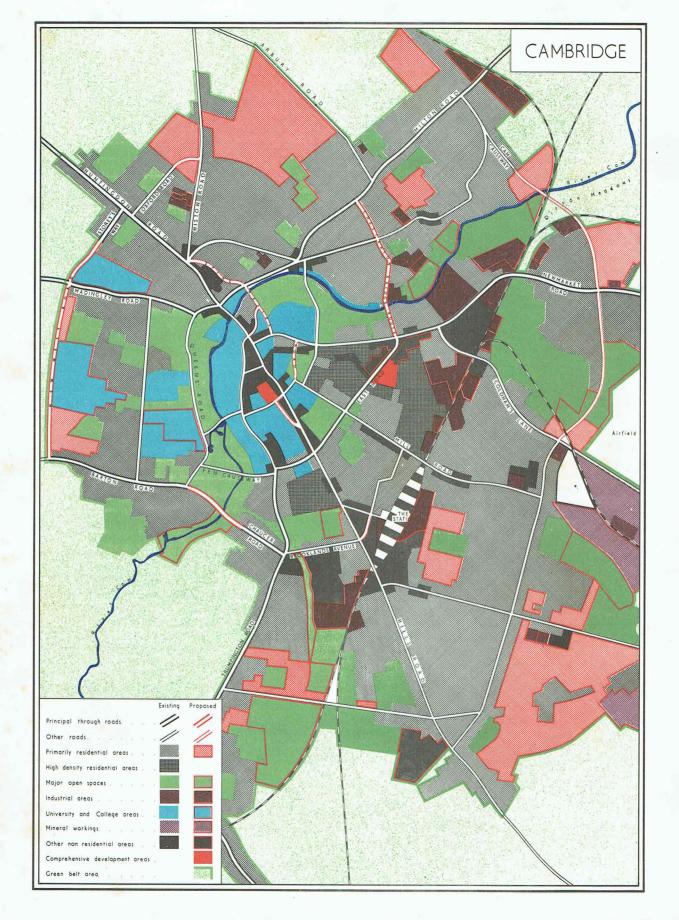
REDEVELOPMENT SCHEME, EAST ROAD

price for a new building that stands isolated in a decrepit neighbourhood, even if the cleared site and its access should happen to suit his purpose - which is The only alternative to wholesale clearance is to leave vacated sites empty until the last remaining buildings in the blighted area have succumbed to the long, slow process of decay - which meanwhile will be continuously spreading, like dry rot in a floor or fungus rings on a lawn, into neighbouring areas. Nowhere in Cambridge has this cancer neared the point reached in some of our big industrial towns, at which buildings become unfit for use faster than all available resources can replace them. But that danger is imminent: only prompt surgery can avert it, for the disease is already active. Here again is proof of the consultants' conclusion that "one cannot make a good expanding plan for Cambridge". If industrial development and the immigration it entails were allowed to go on unchecked, Cambridge's building labour force would be endlessly occupied in housing the newcomers: there would never be men and materials to spare for redevelopment. It is only the setting of a limit to the further increase of the city's population that has made it possible to tackle the "blight" problem before it begins to get out of hand.

The Plan proposes that a modest start should be made in the East Road district, where two-thirds of the houses are unfit, or soon will be, and where the net density runs as high as 120 habitable rooms to the acre - four times as high as on the average inter-war housing estate in Cambridge. A ten-acre site is designated in the Plan for compulsory purchase as a comprehensive development area. This enables the City Council to acquire it, clear it of buildings and redevelop it as a whole with the aid of Government grants. It lies at the heart of what the consultants described as "an area of almost continuous dilapidation". In part it is derelict, for some of the old houses have already fallen down or been demolished because they were unsafe. Half the remainder are classed as having "no life" - i.e. they are already unfit to live in - and many are overcrowded. Only two are modern. Mixed up with them are equally obsolete shops and business premises.

When this site has been cleared the existing network of narrow lanes and courts will be discarded, East Road will be widened and the shops that lined it will be replaced in Norfolk Street, away from through traffic, while displaced businesses will be reaccommodated on the south side of Newmarket Road. About 200 families will be rehoused on the site in cottages, maisonettes and flats. Every five years, when the Plan is due for revision, further sites in this district (and later in the area south of Lensfield Road) will be designated for redevelopment. Parts of them will be needed for schools and business purposes, but 55 acres will be reserved for housing. It is hoped that 1,900 families will have been rehoused by the end of the Plan's twenty-year period some of them in less congested parts of the city.

The effect will be to reduce the gross density of the whole East Road district from 49 to 40 persons to the acre. This is still a high figure - nearly twice as high as the projected average for all residential areas of the city. It means that most East Road residents who want to grow their own vegetables, flowers and fruit will have to take allotments. But it cannot be reduced without adding to the acreage that must be taken for housing on the outskirts of the city,



or unduly raising the density in other districts. It would, of course, have to be a good deal higher still if the city were allowed to grow much larger, because more land in the East Road and other inner districts would then be needed for business purposes.

\* \* \*

As redevelopment proceeds, all the shops, warehouses, factories and other workplaces that now pepper the residential areas within a mile and a half of the city centre will be gradually regrouped - the shops on convenient sites off the main traffic roads, the larger factories (including the University Press) near the railway, the business premises chiefly on the south side of Newmarket Road, and the small workshops, yards and service industries in pockets widely distributed among the residential districts whose needs they serve. Two undeveloped sites in Milton Road East and Coldham's Lane, with a combined area of nearly 30 acres, are designated in the Plan for compulsory purchase by the City, so that they can be made ready at once for workshops displaced in the first stage of redevelopment and for expanding enterprises whose presence in a residential neighbourhood is unwelcome.

There are many other space-consuming needs that must be met by a development plan. In Cambridge the planning authority has been able to make reasonably generous provision for all of them, thanks to the limit it has set on the city's further growth and the fairly high density standard it has adopted for redevelopment. Cambridge already has four and a half acres of public open space for every thousand of its population, and is exceptionally fortunate in that more than half of it consists of broad commons easily accessible from its inner residential districts. Besides adding new areas of public open space to the existing commons, the Plan makes proposals for a further 140 acres elsewhere, so that when the population reaches its limit everybody will have one-third more space for open-air recreation than they had before. One object of the additions is to complete a continuous system of open space along the banks of the river.

Cambridge also has an unusually large acreage of allotments in proportion to its size, and though much of the land which has been in temporary use for food-growing will have to be built over, many temporary allotments are to be made permanent under the Plan. At the same time the area devoted to playing-fields for secondary-school pupils and technical-college students will be more than trebled, and that reserved for the Cherry Hinton chalk and marlpits will be doubled, while the total amount of space set aside for civic and non-university cultural activities will be enlarged by two-thirds. For the University, the colleges and their playing-fields the Plan sets aside a larger additional acreage (271) than for any other purpose except housing, and this is only the first twenty-year instalment of a much bigger scheme, discussed in Chapter IV.

Most of this extra land, like the 775 acres required for new housing on the city's outskirts, has hitherto been farmed, but over 200 acres of it was not being used for anything when the planning authority made its survey.

The Plan sets out in detail where and how and to what extent it is intended

to allocate land and to erect buildings in the years up to 1971 for education, health, utility services, Government departments and a host of other public and private purposes. These provisions have no exceptional features that need concern us here.



Above: View from Nine Mile Hill, Bottisham.

Below: Grantchester Meadows.





Above: King's Parade.

Below: Trinity and St. John's College Backs.



## CHAPTER IV

Let us pause a moment at this point to stand back and take our bearings.

We saw in Chapter II that the key to the Cambridge Plan - the basic act of policy from which all else flows - is the decision of the planning authority "that Cambridge should remain predominantly a university town".

So far, in following out the implications of this decision, we have been looking at what it means in terms of the general development of the city - at the way it affects the livelihood and leisure of most of its people. And this, we have seen, is largely a matter of what happens in that part of Cambridge which lies to the east of the spine road, where four-fifths of the population live and work.

We are now going to see what the basic principle of the Plan implies for the University itself and for the centre of the city. Another glance at the anatomy of Cambridge shows that its main commercial district occupies the site of the original market town - a small triangular area on a gravel terrace near the river crossing. Round this nucleus cluster the main University and college buildings, hemming it in with hardly a gap. This central core of commercial, civic and academic buildings lies wholly on or to the west of the spine road, and is in turn almost surrounded by open spaces - the Commons, the college gardens and the Backs. This is the Cambridge the world knows - the University Town - with its cramped entrances, its domestic scale, its aesthetic balance of picturesque huddle and formal architecture, and the dramatic contrast between the lively bustle of its narrow, awkward streets and passages, the serene seclusion of its college courts, and the tailored glories of its riverside grounds. It is to the integration of two dominant uses - academic and commercial - in this compact area of half a square mile that Cambridge owes the unique character which it is the basic purpose of the Plan to maintain.

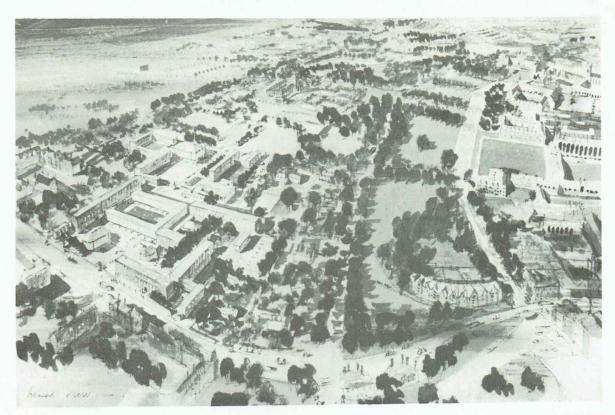
Obviously neither of these uses can be considered from the planner's point of view in isolation from the other, or from the traffic problem which the growth of Cambridge has made common to both. A plan to resolve the conflicts between them and to reconcile their future needs must be conceived - and judged - in the round. Unfortunately it cannot be presented in the round: its objects and features must be explained one at a time. For the sake of clarity, therefore, I am constrained to deal with the University, the commercial centre and the traffic problem in successive chapters. I rely on the reader to suspend judgment until the composite picture is complete, bearing in mind that the proposals set forth, like the needs they seek to meet, are inextricably interdependent.

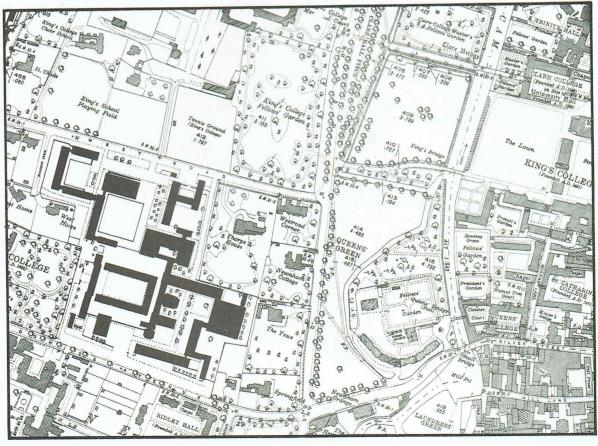
I begin with the University because (to quote once more from the consultants' report) its "national function must in some things take precedence over any matter of merely local significance ... A first aim of a development plan for Cambridge must be to provide as well as possible for University and college needs". In particular, it is a national necessity, and clearly implicit in the first principle of the Plan, that the University's need for room to expand should be regarded as a prior claim that must be fully and satisfactorily met. Buildings are urgently required to house new University departments (mostly scientific), to rehouse others that have been expanding in already overcrowded premises, and to accommodate an undergraduate body that has lost over a thousand sets of lodgings since before the war and may increase its numbers by another thousand within twenty years - to say nothing of the swelling ranks of research graduates.

Where should these buildings go? It is easy enough to formulate on paper the requirements of an ideal location, but in Cambridge, unhappily, some of them are mutually incompatible - largely because of the planless way in which both the city and the University have expanded in the past. It is desirable that the site of any new college, or college extension, should be in the centre, so that its members may be encouraged to mix with those of neighbouring colleges; but it should also be away from traffic noises, close to the college playing-fields and roomy enough to allow good daylighting, natural ventilation, and future growth. It is equally desirable that the staffs and research students of specialised departments should be brought into frequent contact with graduates in other fields; but also that the buildings they regularly use should all be within easy reach of one another.

These divergent aims are reflected in the recent trends of University development. Up to 1920 the general effect was to consolidate the ring of academic buildings round the old town centre. Since then centrifugal forces have prevailed; plans have been made, and in some cases carried out, for science buildings to push southward beyond Lensfield Road, arts buildings westward across the Backs, and others north-westward towards Madingley and Girton. Meanwhile the idea of grouping new buildings (and eventually regrouping the old) according to their function and the convenience of the dons and students who use them has been frustrated by the lack of any adequate study of the factors involved.

The consultants recommended that all the land west of the Backs between Barton Road and Huntingdon Road should be treated as an academic reserve, so that the University and colleges should be assured of an ample acreage, as close as possible to their existing buildings, for all conceivable future needs. They also suggested that sites in this area should be preferred for any tall blocks the University might want to erect, so as to retain the modest architectural scale of the city centre, where the few buildings of more than four storeys are fortunately screened from general view. They further urged that the southward trend of building for the science departments should be brought to a halt, certainly at Coronation Street, and so far as possible at Lensfield Road, partly because Lensfield Road will become a major traffic artery when the Chesterton Bridge is built (see Chapter VI), and partly because the clearance of





UNIVERSITY DEVELOPMENT, SIDGWICK AVENUE

old houses in this area will give rise to a further suburban extension of the city if their occupants cannot be rehoused on the site.

Since the kind of shop that needs upper floors and storage space is moving towards the south-east of the town centre, the consultants saw no objection to college extensions replacing the more obsolete shops and business premises on the St. John's Street-Trinity Street-King's Parade line, especially if local shops were accommodated in their ground floor frontages (which in any case would be unsuitable for students' rooms). They also favoured the erection of a new college, or an extension to Magdalene College, on land to be redeveloped east of Bridge Street. But they recommended that if further college building were required on a considerable scale it should take place on the northern part of the academic reserve to the west of the Backs.

In accepting (as it did) the first of these recommendations the County Council has not attempted to prejudge University policy or to dictate the direction of academic development. The effect of its decisions is simply to keep the area west of the Backs free from development of such a kind as would prevent or restrict its academic use, or impair the qualities that make it ideal for this purpose - its quietude, its wealth of fine timber, its spacious building sites and its continuous integration with the wonderful line of riverside colleges that forms the most distinctive feature of the Cambridge scene.

In the numbers of its membership Cambridge University may not expand as fast or as far as the consultants anticipated. But physical expansion there must be, and on a considerable scale. If the University and colleges take full advantage of the opportunity preserved for them by the Plan, they can eventually spread over two or three times the area they now occupy without coming into conflict with commercial needs. Yet the city centre will retain its traditional function and character as the meeting-place for academic and urban activities. The University Town - that intimate commingling of commerce and culture, islanded in green lawns, which the world thinks of as Cambridge - will remain a compact, close-knit whole, almost entirely contained within a precinct whose largest dimension will be no longer than before.

The Plan refers in particular to the new Arts Faculties building to be erected on a 13-acre site in Sidgwick Avenue, which will give a great impetus to the westward trend of university development; to the building of a School of Veterinary Medicine on Madingley Road, near the University Farm; to the possible use of land adjoining the Sebro site for a nuclear science building, and to the completion of the Chemistry Laboratories in Lensfield Road.

## CHAPTER V

We come now to the second of the two dominant functions of the central core of Cambridge - commerce. If the needs of the University and colleges are given first consideration, and met as generously as the Plan proposes, is it possible at the same time to satisfy the demands of the shopkeepers and the business men, and yet preserve the traditional character of the city centre? This character, be it remembered, consists not only in the integration of academic and urban life, but also in the irregular medieval pattern of narrow streets and footways, in the contrasts of architectural form, and above all in the modesty of scale that permits academic buildings of only moderate height to retain "a suitable pre-eminence".

If no limits were set to the further growth of the city and its surrounding villages the answer would certainly have to be "No". Nowhere is the fact so plain as in the city centre that "one cannot make a good expanding plan for Cambridge". If the city's population were doubled (as it would be by the end of this century if it grew at Oxford's pace) only two courses would be open. Either a new centre would have to be built further east, or the existing centre would have to be changed out of all recognition, with widened and straightened streets, office blocks and department stores towering over the old college buildings - and no room to spare for new ones. Either solution would destroy for ever the familiar character of the University Town.

Up to a point, however, the effects of a further growth of population on the city's commerce can be absorbed by the old centre without materially altering its character. For this there are several reasons. In the first place, a substantial area to the south-east of the Guildhall, ideally situated for commercial purposes, is at present grossly underdeveloped, with many more or less decrepit two-storey buildings and a large plot of open land (the Lion Yard) wastefully used as a ground-level car park. Secondly, about 16% of the floor space in the old centre is still being used for residential purposes; and while it is certainly desirable that people who like living in such surroundings should be able to do so, the existence of numerous top-floor flats suitable for conversion into offices is likely to delay the replacement of the present buildings by tall commercial blocks.

Another source of reserve capacity is the survival in the centre of shops and businesses of the kind that do not need a central location, and which, as increasing demand forces up land values and rentals in the centre, will find it more profitable to move out to subsidiary centres in the new and redeveloped residential districts. This, of course, is a natural process which has been going on ever since Cambridge began to spread beyond easy walking distance from the centre. In allocating sites for local shops, offices and service

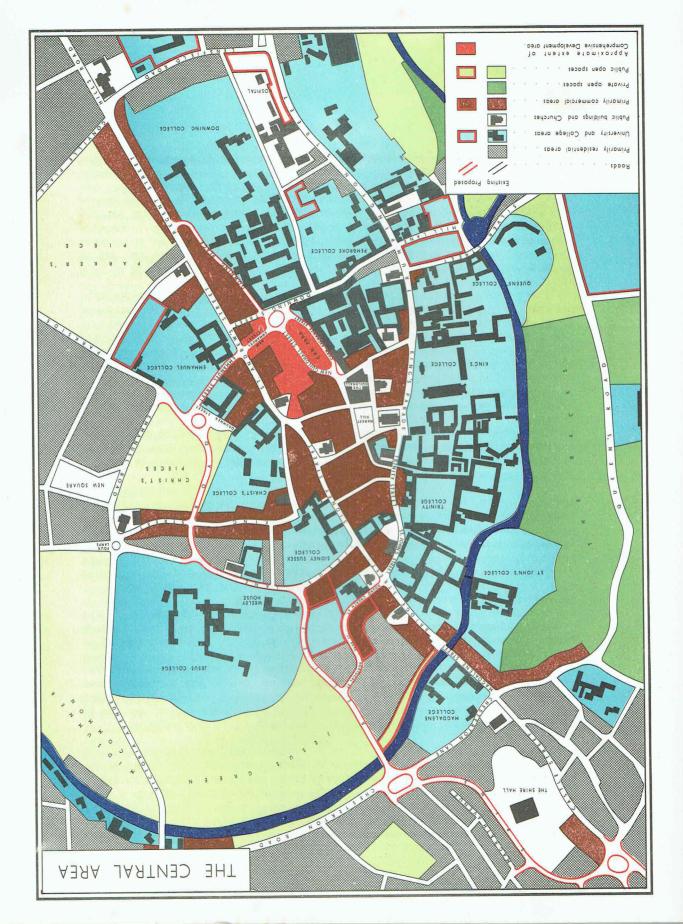
industries in the suburbs the Plan merely provides for its more orderly continuance.

The kinds of business that do need a central location are the specialist shop, selling things like pianos, that most people buy only once in a lifetime, or things like books, which they buy more often but want to choose from a wide range; the high quality shop, catering only for a small proportion of the buying public; the department store, depending on the rapid turnover of a large stock of goods; professional firms offering services of the sort which most people rarely need; entertainments with a limited appeal; the regional offices of banks and insurance companies, and such ancillary businesses as restaurants and cinemas. All these, for various reasons, can exist only in places which are at least occasionally visited by a large population, and in a town like Cambridge, which caters in such ways not only for its own townsfolk but for the people of a wide rural area as well, it is obviously to their mutual advantage to be close together in the town centre. So much so that they can afford to pay higher rents and rates than businesses like groceries that cater for the regular weekly needs of people living in a limited area.

The result is that the amount of space required in the commercial centre of a town does not increase in direct proportion to its population - or to the population that uses its central-area shops. The rising demand for space of the true central-area businesses leads to a rise in property values in the centre, causing other kinds of business to move out, and so makes their premises available for conversion or reconstruction. A draper goes, and a high-class tailor takes his place; a garage is demolished, and a department store rises in its stead. That is why the number and size of the shops in the centre of Cambridge grew so slowly (about 4%) during the inter-war period, while the population that shopped in the central-area went up by leaps and bounds. And there is still scope for this process to continue, helped on by the provision of fresh sites for the outgoing businesses in the centres of the newly developed or redeveloped residential districts.

On the other side of the balance must be set two factors making for an increase in the total demand for floor space in the city centre. One is the frustration (by wartime and post-war controls) of a good deal of commercial building which would otherwise have already taken place. The other is that most of the older commercial buildings (of which about a quarter are decrepit) cover too high a proportion of their sites: there is too little space between them to admit enough light and air to their interiors. When these buildings come to be replaced the new buildings will have to leave room for adequate ventilation, daylighting, fire precautions, and sometimes rear access for the delivery of goods. If, then, they are not to be twice as tall as the old ones - and it will in any case be difficult to get an economic rent for the upper floors of buildings higher than three or four storeys if the city's growth is limited - they will contain less floor space; and more floor space will have to be provided elsewhere to take the overspill. The loss may amount to anything up to 250,000 square feet.

Weighing these various factors one against another, the consultants



concluded that a substantial net addition to the present commercial floor space in the central area would be required during the twenty-year period of the Plan. And they rightly insisted that the question of where to put it must be approached from a strictly commercial point of view. It is simply no use offering a trader a site or a building, however commodious, in what from his point of view is the wrong place. He just won't take it. He would rather make do with inadequate accommodation in the right place.

The right place, in Cambridge, is somewhere in the south-eastern part of the city centre, between the Guildhall and the bus station. Nearly all the big shops, apart from the motor showrooms, are now to be found here, within a semi-circle of 200 yards' radius from Christ's College gateway; and all central-area businesses, of whatever kind, find it pays to be close to the big shops. Recent changes in land values confirm that the city's commercial centre of gravity has been shifting slowly south-eastwards, leaving the northern and western parts of the central area increasingly to traders catering for local residents, tourists and the University.

The scope for new commercial development, or redevelopment, of a central-area type on the existing street frontages within this semi-circle is virtually confined to a short stretch on the east side of St. Andrew's Street. There is, however, ample room on the neglected back land of the ten-acre block between St. Andrew's Street and Corn Exchange Street, part of which consists of the Lion Yard, an empty plot of waste land used only for car parking. If this area were opened up it would offer the most desirable commercial sites in the city.

It is therefore proposed that a broad new street with wide pavements, to be called New Guildhall Street, should be cut through the Lion Yard and the obsolescent property at each end of it, continuing the present Guildhall Street to Downing Street; that the central portion of the long island site between the new street and Corn Exchange Street should be occupied by a three-storey open-deck car park with shops on the ground floor, taking 500 vehicles (more than three times as many as the Lion Yard); and that the remaining sites on both sides of New Guildhall Street and its links with the present street network should be available for blocks of shops and offices, the new Head Post Office and other central-area buildings, all with rear access for delivery. By these means a substantial amount of new floor space can be provided in the most suitable situation without altering the character of the central core of Cambridge or bringing anything but improvement to the immediate locality.

It is indeed fortunate for Cambridge that there is, in just the right quarter of the city centre, such a sizeable piece of land - much of it undeveloped and most of it already owned by the City Corporation - available for commercial building. The Plan accordingly proposes that the whole scheme should be carried through within the twenty-year period. It is also proposed that the new street should be continued by way of Downing Place through to Regent Street, and linked with St. Andrew's Street by a continuation of Emmanuel Street. The value of these new streets for the relief of traffic congestion in the city centre will be considered in the next chapter; here it need only be added that, as an

integral part of the central system of traffic circulation, New Guildhall Street will soon become familiar ground to the shopping public; it should bring immediate relief to the present congestion of traffic in St. Andrew's Street, to the advantage of shops and shoppers in both.

Will New Guildhall Street suffice to meet the need for more commercial floor space over the next twenty years? This is a question which no one can answer with complete confidence. No other substantial provision for shops and businesses of a central-area character is made in the Plan, but its review every five years will afford ample opportunity to reassess the position in the light of events; meanwhile a close watch is being kept on such indications of unsatisfied demand as the trend of site values.

Before we leave this question, however, there are two more relevant considerations to be noted. One is that Cambridge has, in the Fitzroy Street-Burleigh Street area just east of New Square, a secondary commercial centre which already contains establishments of a central-area type, which is not much further from the bus station than the original town centre, which is closer to the centre of the city's built-up area, and which will become much more readily accessible to the bulk of its population when the road proposals outlined in the next chapter have been carried out. It may well prove more attractive than the old town centre for the kind of central-area shop whose trade is of more than local but less than regional scope - the town shop rather than the town-and-county shop. However that may be, the existence of this subsidiary centre provides a useful safety-valve in case the pressure of demand for floor space should exceed the capacity of the old centre to meet it without jeopardising its own essential character.

The second consideration is that shops and businesses of the central-area type in Cambridge serve the occasional needs of the people in several small towns beyond the county boundary, as well as in the city itself and its rural To this extent the future scale of the demand that must determine the amount of floor space required in the city's commercial centre is beyond the control of the local planning authority. However successful that authority may be in limiting the further growth of the city and surrounding villages by restricting the expansion of their capacity to employ immigrant workers, it cannot prevent any large-scale town development in one or other of the neighbouring counties, such as may well be undertaken to accommodate part of the overspill from Greater London. In that event the importance of Cambridge as a regional capital would certainly be enhanced, and with it the prosperity of its central-area shops. It is probable, however, that the resulting rise in the floor-space requirements of the specialist and quality shops would be only marginal, and there might be an offsetting loss to the new or expanded towns of rural customers for goods of a more general type.

Subject to these somewhat problematical qualifications, the provisions of the Plan meet all foreseeable needs for both academic and commercial expansion in a way that complies with the established tendency of culture and commerce to shift their centres of gravity respectively westward and eastward, and at the same time maintains unimpaired both the physical appearance of the

city centre and its traditional function as a meeting-ground for the two essential elements in this uniquely blended community.

## CHAPTER VI

"If probability of rapid growth is the gravest problem in the planning of Cambridge, the most urgent is that of traffic", said the consultants in the introduction to their report. That was why they dealt with the road system first and most fully, describing their survey and their proposals in some detail. And that in turn may account for the impression received in some quarters that their Plan gives precedence to traffic needs. A more careful study of their proposals makes it plain that this is a false impression - that the contrary, in fact, is the case.

The Statutory Development Plan puts the consultants' proposals in a truer perspective. It sets out seven major principles, of which six have so far been quoted here. The first, representing the basic policy decision on which the whole Plan is founded, is "that Cambridge should remain predominantly a university town". Three others, as we have seen, are implicit in the first: given that basic principle and the facts emerging from the survey, they follow automatically. Two more refer only to the rural parts of the county. The remaining one is:-

THE PROVISION OF A COMPREHENSIVE ROAD SYSTEM CAPABLE OF SATISFYING TRAFFIC REQUIREMENTS IN THE CITY.

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In order to grasp the nature of the traffic problem, let us first take another look at the anatomy and evolution of Cambridge, the key to which (from the traffic point of view) is to be found in the position and capacity of its bridges. The city owes its foundation to the Great Bridge (now Magdalene Bridge) crossing the Cam from north-west to south-east. From the north-western end of this bridge three main routes fan out: westward to Bedford and the South Midlands, north-westward to Huntingdon and the North Midlands, and northward to Ely and the Fens. Three more fan out from its south-eastern end: eastward to Newmarket and East Anglia, south-eastward to Linton, Haverhill and Essex, and southward to Royston and London. Note that the axial route (north-west to

south-east) is the least important of the three direct through routes: the Great Bridge was primarily a means of travelling between London and King's Lynn and between East Anglia and the Midlands.

The original settlement was at the north-western end of the bridge, near Castle Hill, but the natural place for the market town and the University to develop was at the other end, on the gravel terrace within the bend of the river, from the road junction southwards towards the Small Bridge (Silver Street) linking the town with the hamlet of Newnham. So the triangle formed by the axial road and the London road was built up, with a street pattern suited to the needs of the market, the University and the traveller, into what is now the city centre.

Then came the railway and residential development in widening semicircles on the north-eastern side of the axial road and on both sides of the river. The result was an increase in local traffic across the Great Bridge and along the axial road (which thus became the backbone of the town), and a growing need for another bridge further downstream to give residents north of the river more direct access to the town centre, as well as to divert east-west through traffic away from the town centre. Later developments in south and west Cambridge gave rise to a similar need for a new bridge further upstream to relieve Silver Street bridge.

To meet these needs Cambridge undertook two major projects - the only substantial road schemes designed to improve traffic circulation that it has yet carried through. In 1890 it built Victoria Bridge and Avenue and in 1925-6 Fen Causeway. Each was a compromise, combining the functions of an inner bypass (to draw through traffic away from the town centre and Magdalene Bridge) with those of a local link between new residential districts and the industrial and commercial areas.

The highway network thus brought into being served well enough at the time, but its surplus capacity is now used up. Traffic has increased tenfold since 1911, while the medieval street pattern of the central area, with its bottlenecks, cramped junctions and awkward alignments, has remained unchanged. It can barely carry today's peak traffic load with the aid of a oneway circulation system. It cannot cope with the increase in that load which any expansion of Cambridge and the neighbouring villages must bring, let alone with that general doubling of the volume of traffic which we are told to expect within the period of the Plan.

So much for the scale and urgency of the traffic problem. Now what of its composition? It is made up of three main elements: through traffic, university traffic and local traffic.

Two main characteristics of through traffic were revealed by the County surveys. First, it is relatively light; it averages only about one-fifth of all traffic crossing the city boundary, and this proportion is unlikely to rise above one-quarter. Secondly, hardly any of it attempts to fight its way along the straight spine road running north-west and south-east through the city centre,

and very little of it (about 4% on a normal weekday) enters any part of the congested central area. About 40% of it passes to the west of the centre, by Fen Causeway and the Backs road (Queen's Road), en route between London and the Fens or the North Midlands. Another 40% passes to the north of the centre by Victoria Bridge, on its way between the Midlands and East Anglia, while a minor stream skirts the eastern edge of the centre between the London and Newmarket roads. Through traffic therefore plays a negligible part in the congestion of the city centre - but only because the city centre is already too congested to give it easy passage.

The important things about the University traffic are: (a) that it is mainly concentrated on city-centre streets (including the spine road); (b) that it consists largely of cycles and pedestrians (in 1948 the main streets of the central area carried about four times as many cycles as motor vehicles at peak hours); (c) that it gives rise to much obstruction of footways by cycle parking; and (d) that it will tend increasingly to overflow from the centre to and fro across the Backs - i.e. across what is now a main channel for through traffic.

Of local traffic the chief features to be noted are these. 1. Nearly all of it originates at either end or to the north-east of the spine road. 2. Its main flows are controlled by the paucity of river and railway bridges and of side entrances into the central area. 3. Its main constituents are traffic between residential areas (or outlying villages) and the city centre, the industrial zone and the bus and railway stations; traffic from one residential area to another is of less importance. Local traffic into and out of the central area, therefore, has to contend not only with the university traffic within it, but also with "local-through" traffic traversing it (chiefly along the spine road) to get to destinations at or beyond its other end.

This analysis of the composition of Cambridge traffic suggests various alternative ways of coping with the imminent growth in its volume. But the planners restricted their choice by making two basic assumptions. The first was that they should reject any solution which involved making any major change in the appearance and character of central Cambridge. The second was that Cambridge would not be able to command more road-building resources during the period of the Plan than it had used during a similar period before the war, and would not be willing to sacrifice for road improvements any more open land or useful buildings than it could help.

Taking analysis and assumptions together, two governing principles emerge:-

(a) Improvements that make use of existing streets and serve the immediate needs of both through and local traffic must have priority over more expensive new roads whose only value would be to keep the relatively small volume of through traffic right outside the built-up area of the city. But where it is likely that such new roads will eventually be needed the best routes should be determined and the necessary land protected against the kind of development that would hinder its use for





road purposes in due course.

(b) Given that the volume of traffic going into and out of the central area will probably be more than doubled during the period of the plan, while its university traffic will increasingly overflow across the Backs; given also that there must be no appreciable change in the appearance of its streets and the character of its life as the centre of a university town; then the only acceptable way to relieve congestion in the city centre and resolve the conflicts between its traffic streams is to free its roads of all the through and "local-through" traffic that now uses them as a means of getting somewhere else, together with as many stationary vehicles as possible.

In the light of these two principles, the most useful road improvement that could be brought about in Cambridge is the building of a new bridge in the middle of the southward bend of the river downstream from Victoria Bridge, with road approaches linking Newmarket Road, at its junction with East Road, to Chesterton Road and Milton Road. This proposal, for which the consultants claimed first priority, is in fact seventy years overdue. It was authorised, along with Victoria Bridge, by the Cam Bridges Act of 1889. When the Chesterton Urban District was incorporated in Cambridge in 1911 its residents were promised that the Chesterton Bridge would be built by 1917. But war intervened; costs went up; and in the absence of planning powers to protect the route, houses were built on the land required.

While its prospective cost mounted, however, the need for a Chesterton Bridge became still more urgent with every increase in the population north of the river and in industrial employment and commercial development on the opposite bank. Ten years ago there was no way of spending public money in Cambridge that could have yielded so high a return for so limited an outlay. Today, in view of the developments contemplated in the Plan, the need is much more pressing, for three main reasons. First, there will soon be up to 5,000 more people in new housing estates north of the river for whom the Chesterton Bridge would offer a direct route to the East Road shopping centre, to the industrial zone, and to the railway station. Secondly, it would open up an eastern inner by-pass (by way of Trumpington Road, Lensfield Road, East Road, the new bridge and its approaches), well clear of the central area, that would offer a quicker and more direct route than the Backs road for through traffic on A.10 (London to King's Lynn), which is the city's most important trunk route. Thirdly, it would ease the pressure of both local traffic and eastwest through traffic on Victoria Bridge and Avenue, which already carry a heavier volume of motor traffic than any other road in the city.

The Plan accordingly confirms the consultants' recommendation that Chesterton Bridge should be built as soon as possible, together with approaches from Milton Road and Newmarket Road, by way of Haig Road, Cam Road and Walnut Tree Avenue. This route limits the number of houses that will have to be demolished to five: most of the extra carriageway width required can be obtained by shortening front gardens. The Plan also provides for the widening

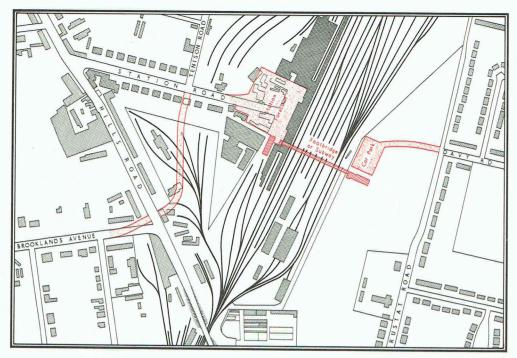
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"In all", says the consultants' report, "about two-fifths of the through traffic circling round the central area runs through one of the world's most beautiful assemblies of buildings and grass and trees, and is likely to conflict increasingly with Cambridge's prime function". The Backs road is inherently unsuitable for through traffic precisely because it is almost impossible to drive along it at a steady pace and keep one's eyes on the road. All heads turn to the east, and all vehicles are suddenly braked as breathtaking glimpses of world-famous buildings come into view. Moreover, its hazards will multiply as more and more University buildings go up on its western side, bringing frequent cross-flows of pedestrian and cycle traffic between their lecture rooms and the series of college bridges. And the more the centre of gravity of university life tends to shift from King's Parade towards the Backs, the more important it will become that the beauty, the quietude and the freshness of this area should be undefiled by the sight, the noise and the smell of motor traffic.

There could be no clearer case of a diametrical conflict of uses, and if the basic principle of the Plan means anything at all there can be no doubt which use must give way. While the Backs road formed the western boundary of that half square mile which the world knows as Cambridge - the old city centre, its ring of academic buildings and their green setting - then its use by through traffic was defensible. But when the westward growth of the University adds another half square mile to this inviolable core, the Backs road will bisect it. This road must therefore be transformed from a trunk route into a peaceful channel for the collection and distribution of the University's internal traffic.

Such transformations, however, cannot be brought about in a democratic community simply by blocking the ends of the road in question. It is necessary first to induce a voluntary withdrawal of the "non-conforming user" by offering a more attractive option. The proposed Chesterton Bridge will, as we have seen, complete an eastern inner by-pass affording A.10 traffic a quicker passage through the city, and will thereby draw off half the through traffic from the Backs road. The other half consists of people travelling between Saffron Walden and Huntingdon or points west and north-west. For them an alternative must be provided on the western periphery of the enlarged academic area, with conveniently inclined approaches.

Accordingly the Plan proposes the construction of a New West Road, from Barton Road to Huntingdon Road. At the City Council's request, its route has been deflected from the consultants' line at its northern end to incorporate part of Storey's Way, and there will be a link with Histon Road along the line of Oxford Road. It is also proposed to build a new bridge and causeway along the line of Chaucer Road to link Barton Road with Trumpington Road. This in turn will be linked by Brooklands Avenue and a short length of new road to Station Road as part of a scheme to improve access to the station from all sides. Eventually, though not within the period of the Plan, this route may be continued via Tenison Road to join the southern end of the new Chesterton Bridge.



IMPROVEMENTS NEAR TO THE STATION

Before the war it was intended to build a by-pass round the east and north sides of the city, and the south-eastern section from Hills Road to Coldham's Lane is already in existence. The building up of both its sides has impaired its potential value as part of a trunk road, but its continuation is considered worth while as a local traffic route between residential and industrial areas, now that large parts of east and south-east Cambridge are being laid out as housing estates. It is therefore proposed to extend it northwards across Newmarket Road towards Ditton Meadows in the later part of the Plan period. Ultimately its northern end will be continued as far as Milton Road by a bridge over the river to Cam Causeway.

These are long-term proposals. They are mentioned in the Plan only because it is desirable that the possibility of carrying them out at a reasonable cost should be kept in being by protecting the road lines from being built over.

## CHAPTER VII

We now come to the most difficult part of the traffic problem - how to relieve the strain on the city's already congested heart. To this task the road improvements we have been considering can make little positive contribution, for the needs that they are designed to meet are those of traffic which already They are none the less indispensable to its avoids the central area. accomplishment in a negative sense - not because they would themselves do much towards it, but because no other scheme could do anything without them. It is no use easing the traffic flows in the centre, or drawing off some of the traffic now using its streets, if you thereby attract into it traffic which now avoids it; and much of the traffic (through and local) that now avoids it does so not because more direct routes are available, but simply because the centre is congested. By making more direct routes available to these traffic streams, the schemes we have been discussing would keep them out of the centre even if Their adoption is therefore an essential it were no longer congested. prerequisite for any effective solution to the central problem.

This problem of serious congestion is confined (as yet) to a relatively small area comprising the commercial centre, its eastern approaches and a north-westward extension along the spine road as far as the Magdalene Street - Chesterton Road crossing. Elsewhere congestion is occasionally acute, but not endemic. It will, of course, spread outwards as the general density of traffic rises if an adequate remedy is not forthcoming.

The traffic using this area is made up of four main elements:

(a) University traffic (with which may be lumped the tourist traffic attracted by the University) criss-crossing the whole area, chiefly on foot or bicycle; (b) city-centre traffic, going into and out of the area by bus, car, goods vehicle and bicycle, and moving about it for the most part on foot; (c) "local-through" traffic, using the central streets merely in order to get from somewhere outside the centre to somewhere at or beyond its other end, and last - and least - (d) such through traffic as still prefers a slow straight road to a quicker detour.

Of these four elements it is to be noted that the first two (University and city-centre traffic) have business in the congested area, distribute themselves evenly over its streets (including those that make up the spine road), and must not be impeded - must, indeed, be freed from impediment - if Cambridge is to remain predominantly a university town. The last two, on the other hand, have no business in the congested area, keep to the spine road (except where one-way restrictions push them off it), and serve only to impair the essential character of the city centre by hindering the legitimate use of its streets and the enjoyment of its attractions.

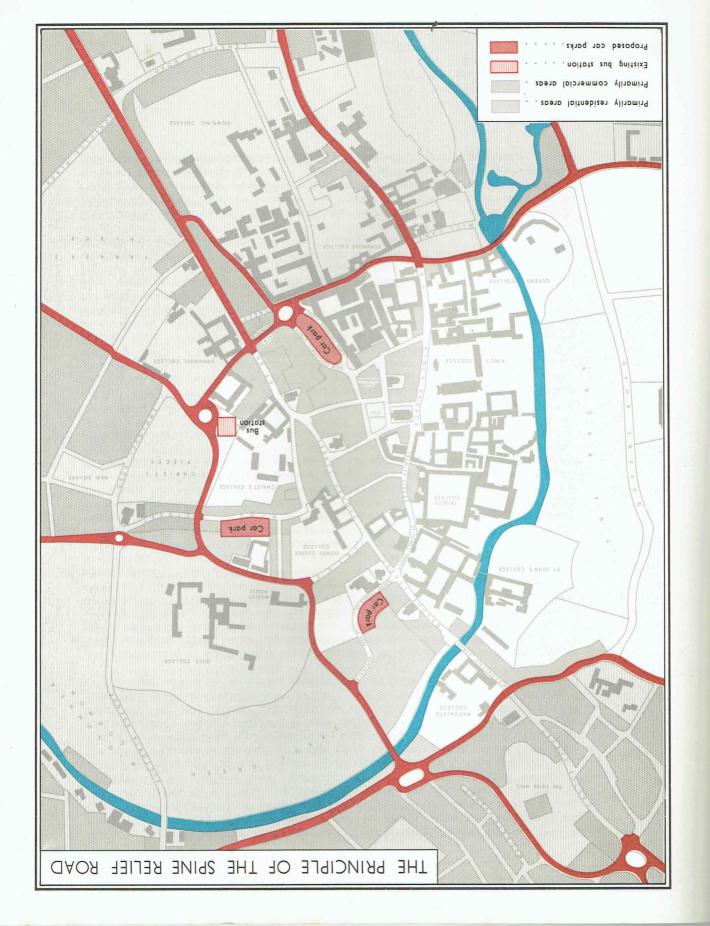
There are four main reasons why this combination of traffic elements results in congestion. In the first place, the main streets of the central area are not only narrow, but strung with still narrower constrictions: only one - the short straight stretch of Emmanuel Street - can take two nine-foot traffic lanes throughout its length. Secondly, the pavements are in many places so narrow that pedestrians would often be compelled to make use of the carriageway even if they did not (as in all market and tourist centres) claim a right to do so. Thirdly, parked cars and cycles still further limit the effective width of streets and footways, especially on Saturday afternoons when the county comes to town to do its week-end shopping. Fourthly, the layout of the approach roads virtually compels the bulk of the traffic using the city centre (for whatever purpose) to enter and leave it by way of the Bridge Street and St. Andrew's Street sections of the spine road.

There are only five other points of entry - three from the east, one from the south, and one from the west. Of these only three (Trumpington Street, Jesus Lane and Emmanuel Street) can carry two traffic lanes; and from two of them traffic must turn left or right along the spine road. In consequence the spine is burdened by a third unnecessary element, in addition to its through and local-through traffic - namely, the city-centre traffic that has to use it to reach that part of the city centre to which it wants to go. Although this traffic does not add to the number of vehicles that have business in the centre and must use the central streets, it does add to the congestion in the centre by travelling further along the spine, and making more turns into and off it, than its business there necessitates.

Here, again, it should be noted that two of the four congesting factors (the carriageway bottlenecks and the inadequacy of the footpaths) cannot be eliminated, or even appreciably modified, without destroying part of that which it is the central purpose of the Plan to preserve; whereas the other two (street parking and the shortage of entry points) themselves detract from the legitimate use and enjoyment of the city centre's primary attractions.

The conclusion is inescapable. The road proposals for the central area must be designed to relieve its congestion by diverting through and local-through traffic away from the spine road; by enabling city-centre traffic to enter and leave quickly, close to where it wants to go, without making needless journeys up and down the spine; and by getting parked cars and bicycles off the streets and pavements. It will then be possible to arrange for the free circulation, within the centre, of traffic that has business there, without further alteration of the layout of its streets or the fabric of its buildings.

Hence the necessity for a spine relief road: a broad, easily graded road free from obstructions, skirting the central core of the city and University, but close enough to the spine to attract through and local-through traffic; a road so aligned that it picks up all traffic moving towards the centre from the north and east (where most of the city-centre traffic originates), and so linked with the centre that it can distribute this traffic across (not along) the spine to whatever part of the centre it wants to reach. Hence also the necessity for the improvements already described in Chapter V - the westward continuation of



Emmanuel Street across the congested St. Andrew's Street, the alternative approach to the centre from Regent Street by way of Downing Place, and the broad New Guildhall Street leading traffic from both approaches straight into the centre without encumbering the spine. Hence, too, the need for the multi-storey car park in New Guildhall Street, which will take over 300 more cars than can now be parked in Lion Yard, and for the two further car parks, to the north and east of the centre, whose exact location has not yet been decided. These three car parks will together be amply sufficient to cater for all long-period parking needs. When they are completed it will be possible to restrict street parking to half-hour waiting on one side of selected streets for shoppers' cars and delivery vehicles - to the great relief of both road users and pedestrians, and to the immense improvement of the urban landscape.

Any attempt to relieve congestion in the centre of Cambridge without building a spine relief road must involve the widening of the spine itself. To be of any material value to the traffic now using the spine, this widening would have to be quite drastic, for the width of its carriageway now varies from 27 feet down to 15 feet 7 inches. It would entail the partial demolition of four colleges and several churches and large stores, as well as the loss of such precious amenities as the front garden of Emmanuel College. Even so, the relief would be short-lived, for the widening of the spine, unlike the building of a relief road, would bring back into the centre much of the through and localthrough traffic from the Backs road or the alternative routes proposed in the Once started, a policy of widening the spine would have to be continued until all this traffic was accommodated. The end result would be a broad river of through and local-through traffic, dangerously jostled along half a mile of its length by cross-currents and tributaries of University and city-centre traffic, cutting off a third of the colleges and a quarter of the commercial centre from the rest of what is still, and should remain, an integrated whole. Nothing could more effectively defeat the basic objective of the Cambridge Plan.

To quote from the consultants' report: "If the spine cannot fulfil all the functions asked of it in the future there seems no doubt about the one it must fulfil. It must remain a principal distributive road within the central area, enabling goods and passengers to be delivered to all premises. It must continue to do this in the sense that one cannot imagine how the life of the central area can be carried on unless it does. As we see them, all other functions fulfilled by the spine are, to some extent, optional ... If it is widened, some of that portion of local-through traffic which at present avoids it, would begin to use it. There would be no more space for terminating traffic than there was before, but there would be more vehicles, wider streets, greater hazards for pedestrians, and more noise. Something of the present character of the centre would have gone, and some buildings of architectural value would almost certainly have gone as well.

"The spine relief road is in our view the most important single improvement that could be made in the Cambridge road system. We realise the difficulties of its construction, and the sacrifices it will require; but we see no practicable alternative ... If a spine relief is not constructed congestion in the central-area will become intolerable, sooner rather than later. If the

relief does not run fairly close to the spine, it will not be used."

The planning authority shares this view. It has accepted in principle the proposal that a spine relief road should be built from Histon Road corner to Drummer Street on or near the line suggested by the consultants. This line is determined within narrow limits by the configuration of the ground and the need to minimise disturbance of existing users of land and buildings. It sweeps in a shallow S-bend (to lessen the gradient) from Histon Road to Chesterton Lane, over the Cam by a new bridge (avoiding Wentworth House), and along the western edge of Jesus Green, preserving the row of trees to separate its carriageways. Traffic for the northern part of the city centre will turn off here into a link road, more or less along the line of Portugal Street, Park Street and Round Church Street, crossing the spine road into St. John's Street. Thereafter the line of the spine relief road crosses Jesus College hockey field into Jesus Lane to the west of Wesley House, follows Jesus Lane half-way to Four Lamps Corner, and then cuts southwards across King Street and Christ's Pieces (preserving Milton Walk and most of the trees) to the present bus station in Drummer Street. The eastward bend along Jesus Lane admittedly detracts from the directness of this route, but any straighter line would mean cutting across the Fellows' Garden of either Christ's or Jesus College.

A large and rapidly increasing number of country people come into Cambridge by bus to shop in its central area. The present open-air bus station in Drummer Street is conveniently situated, but very cramped. The consultants recommended that a new station should be built in place of the dilapidated property on the back land between Christ's College and Emmanuel North Court, and that it should be roofed in to protect passengers from the weather and people in neighbouring buildings from disturbance by noise. This proposal was adopted by the planning authority but rejected by the Minister for the reasons given in Chapter VIII. The planning authority now has the difficult task of finding an alternative site which meets these objections, enables passengers to get as quickly and safely on foot to and from the central shops, and is as easily accessible by road from all approaches to the city.

The most serious sacrifices which the spine relief road entails are the loss of one-fifth of the area of Christ's Pieces, of most of the Jesus hockey field, and of one-twentieth of Jesus Green. The disturbance of Marshall's Garage, on Jesus Lane, will be more than compensated by its resiting on a heavily trafficked highway. Most of the house property affected (chiefly in Park Street) is already obsolescent and in poor condition.

It is not suggested that these are negligible sacrifices; the violation of Christ's Pieces, in particular, "can only be admitted if the relief route is accepted as being essential to prevent intolerable traffic congestion in the whole centre", as the consultants freely concede. But "the alternatives are not disturbance versus no disturbance. They are, we believe, moderate disturbance in a limited number of places over twenty years versus postponement of effort, accompanied by increasing congestion throughout the centre, and finally costly and large-scale disturbance, in an attempt to prevent

the centre becoming impassable."

The planning authority proposes to defer a final decision on the exact line of the route until after the first five-year stage of the plan period, during which the growth of traffic and the direction of traffic flows will be closely observed. In the meantime, however, the northern portion of the provisional line needs to be protected against frustrating development, and has therefore been marked on the Town Map. The southern portion, from Jesus Lane to Drummer Street, is not shown because it is not likely that any building will take place during the first five years on the short length of it still in private ownership. This does not mean, of course, that the southern portion is any less a part of the Plan than the northern portion.

It was part of the consultants' proposals that when the spine relief road was completed, Magdalene Bridge should be closed to vehicular traffic. No mention is made of this recommendation in the Plan, because it cannot be carried out within the twenty-year period: as pointed out in the case of the Backs road, such a drastic step is possible only when a more attractive route is already in being. But it is unlikely that the full benefit of the spine relief road will be reaped until Magdalene Bridge is restricted to outgoing traffic.

Among the incidental benefits to be expected from the spine relief road are: (a) that it will open up the decrepit area between BridgeStreet and Park Parade for redevelopment (in the form of a car park, college buildings, students' lodgings, houses, shops, offices and garages); (b) that it will relieve the busy crossing of Magdalene Street and Chesterton Lane; and (c) that it will encourage commercial use of the dilapidated King Street area.

At the St. Andrew's Street end of the spine, where congestion is now most acute, relief will be afforded at an earlier stage by the completion of New Guildhall Street and the associated proposals. These have already been considered (in Chapter V) from the standpoint of the need for more commercial floor space; but their value as road improvements will be at least as important. Traffic collected by the spine relief road, and not already fed into the northern part of the city centre or into the northern and eastern car parks, will either proceed along Parkside towards suburban destinations or enter the central area by way of Emmanuel Street. But instead of being compelled, as now, to turn into St. Andrew's Street at the busiest junction in the city, it will be able to drive straight across the spine and down New Emmanuel Street to the new roundabout. There it will be joined by traffic from the southern part of the city, diverted from Regent Street and St. Andrew's Street by the proposed extension of Downing Place, and the combined streams will proceed up New Guildhall Street to the three-deck car park. Thus St. Andrew's Street may become again a shopping street rather than a traffic artery.

Traffic to West Cambridge will continue straight on from New Emmanuel Street along the existing cross-town route by way of Downing Street, Silver Street and the reconstructed Small Bridge. (Here the planning authority has departed from the recommendations of the consultants, who suggested the widening of Mill Lane and the building of a new bridge over Mill Pit.) The

erection of the Arts Building in Sidgwick Avenue will soon add to the importance of this route.

When these improvements have been completed, a revised circulation system and new parking regulations will be worked out for the central streets. Meanwhile it is intended, at the first five-yearly review of the Plan, to decide on the exact site and form of the new bus station and of the two large new car parks to the north and east of the centre. Cycle parks and the off-street loading and unloading of goods vehicles will be provided for as and when practicable, particularly in connection with redevelopment and the construction of new streets. But the delivery of goods and passengers must continue to enjoy preferential treatment as the most necessary use of the central streets.

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The effect of all these road proposals will be to create for the University and the city's commerce a central reserve in which their combined needs and interests can be given absolute priority, unhampered by conflicting uses. As the consultants put it in their report, "At present the central area is regarded, from a traffic point of view, in two separate ways: as a precinct with two main uses and a very special character; and as an obstruction through which traffic up and down the spine must be enabled to plough its way more or less easily. We propose that when the relief and cross-town routes have been constructed the second view of the central area should be abandoned." Thereafter these two routes, carrying local-through traffic round the central precinct, will clearly mark the boundary between it and the populous part of the town. Ultimately the precinct will comprise the whole of the area between the spine relief road and the New West Road; then the Backs and the spine will take their proper places, with King's Parade, as internal ways - the one an academic grove, the other two devoted to that peculiar synthesis of culture and commerce which makes Cambridge "the only true university town in England."

## CHAPTER VIII

The public response to the basic purpose of the Cambridge Plan, and to the major principles it laid down as the necessary means to give effect to that purpose, was as cordial - even enthusiastic - as any planner could desire. That Cambridge should remain predominantly a university town, and that, to this end, the growth of its population should be limited through the control of industrial expansion and the development of neighbouring villages - these decisions were almost universally welcomed. So also were nearly all of the particular proposals by which the planning authority sought to meet the city's needs in accordance with these principles.

Serious opposition was virtually confined to three projects - the spine relief road, some aspects of the New Guildhall Street scheme, and the location of the new bus station. But since the long-drawn-out public inquiry at which this opposition was expressed was not an inquiry into the Plan, but into objections to the Plan, these projects loomed larger than life: by concentrating all attention on them, the inquiry made it seem that the Plan was having a hostile reception. I am not, of course, belittling the importance of these projects. They form integral parts of a comprehensive design. Subject to modification within fairly narrow limits, they are essential to the full achievement of the Plan's basic purpose. But it is as well to keep them in their true perspective, and to remember that they constitute only a part of the solution proposed for one of the major problems in one section of the city.

In my introductory chapter I said - thankfully - that it was no part of my task to weigh the pros and cons of the controversy over the central-area road proposals. The arguments of the objectors occupy hundreds of pages in the official report of the public inquiry, and the inquiry itself represented only one phase of a fluctuating line of attack. At other stages the front has broadened and narrowed, advanced and receded. Alliances have been formed and broken, sides changed and horses traded. Objectors who joined forces at the inquiry to denounce - for differing reasons and with varying emphasis - one aspect of the scheme have disagreed on others and advocated diametrically opposite alternatives.

In such circumstances I have been obliged to abandon any attempt to compile my own summary of the arguments adduced against the proposals in question. Without doubling the length of this booklet I could not hope to present them in a way which would satisfy both their authors and myself as being fair and adequate. Short of that I cannot do better than to quote verbatim the passage in which the Minister of Housing and Local Government mentioned and discussed them in his letter conveying to the Cambridgeshire County Council his approval (with modifications) of its Development Plan:-

"Before deciding finally to approve the Plan, the Minister has given special consideration to those proposals affecting the city of Cambridge which gave rise to controversy when the Development Plan was being prepared, and were argued very fully both by the objectors and by the Council at the inquiry into objections to the Development Plan. This applies particularly to the proposals for the relief of traffic congestion in the centre of Cambridge which were the subject of objections by the City Council, the University, some of the colleges and property owners affected.

"The most important of these proposals is the spine relief road, intended to ease the pressure of traffic on the central streets forming the main route through Cambridge from north to south. This proposal was the result of an analysis of traffic in the centre of the city which led to the conclusion that congestion was caused largely by local traffic; and the Council considered that the remedy lay in the provision of a relief road as near as possible to the central streets and with accesses to them at convenient points. A route was selected on the eastern side of the city centre running southwards from Histon Road across the western end of Jesus Green to Jesus Lane and thence across Christ's Pieces to rejoin the central streets via Emmanuel Street to St. Andrew's Street. In the present Development Plan, however, only the northern section of this route, terminating at Jesus Lane, is included.

"The proposal was criticised on grounds of cost and effect on properties, of the probable ultimate effects on Christ's Pieces, and generally on the character of Cambridge; and it was urged that a relief road is not needed.

"In making their objections the City Council put forward the view that the admittedly serious traffic problems in the centre of the city could best be solved by the gradual widening of the central streets themselves, for which, they pointed out, they already had powers. The University objected to the relief road proposal on grounds of cost and disturbance to amenities, but were also opposed to the alternative solution put forward by the City Council. They considered that the congestion in the centre of Cambridge could be relieved by the provision of better car parks, and also by the new routes for through traffic which the Plan proposed on the east and west of the city.

"The County Council contended that the alternative of widening the central streets would be a slow and costly process and would necessarily alter the familiar character of Cambridge. They admitted that the routes proposed for through traffic to the east and west of the city would afford some relief to the centre, and that car parks might free the roads of standing vehicles. But the problem of local traffic would remain and would increase. They felt that their proposal for a spine relief road offered the best solution of this problem, and that the route chosen was the most suitable from all points of view.

"The Minister appreciates that in old and historic towns like Cambridge, whose central streets are inadequate for present-day traffic, proposals such as the spine relief road must inevitably give rise to sharp controversies. At the same time, he does not feel that such controversy justifies the abandonment of any attempt to solve the problem. Though opinions may vary about the

acuteness of traffic congestion in the centre of Cambridge, it was admitted on all sides at the inquiry that the problem is a serious one now, and will almost certainly become more serious. In considering this matter, the Minister has had regard to probable future as well as to present needs. He agrees that greater parking facilities are urgently wanted and considers that provision for this purpose offers the best prospect of quick relief to traffic congestion in the central area. In this connection, he is glad to note that the City Council intend to provide a multi-storey garage in the proposed New Guildhall Street area, and he hopes that this will be undertaken with as little delay as possible. He also agrees that the proposed routes for through traffic to the east and west of the city should give some help in reducing congestion in the centre; but he does not consider that it can safely be assumed that the carrying out of these proposals. in addition to the provision of more parking space, will in themselves necessarily be sufficient to cope with the problem of central traffic congestion in the longer run. On the contrary, the likelihood that the amount of traffic in Cambridge will continue to grow over the next ten to twenty years suggests that the provision of more road space to ease the movement of traffic to and from the centre may well become an unavoidable necessity; and it is this probability that has been uppermost in the Minister's mind in his consideration of the proposed spine relief road.

"The Minister does not consider that the alternative suggestion put forward by the City Council of widening the existing streets through the centre of the town offers a practical solution. This would be destructive of existing properties, very slow and expensive, and disruptive of shopping and commercial activities over a long time. If, within the period of the Plan, more road space has to be provided to deal with traffic congestion, there is, in the Minister's view, no real prospect of this method affording an effective solution.

"On the other hand, the new route chosen in the Plan by the County Council has the merit of keeping disturbance to a minimum, of causing least offence to the general character of the city, and of enabling a useful stretch of road to be constructed in the foreseeable future should that become necessary. It also fulfils the condition that the relief road should be as near to the central streets as possible and the Minister cannot see how any other route could achieve this.

"The Minister is therefore clearly of the opinion that if a central relief road has to be constructed, the route proposed in the Plan is the one that should be followed; and he has decided to leave it as part of the approved Plan.

"In view of the public controversy that has arisen over this particular proposal, the Minister thinks it important that the practical significance of his decision should be properly appreciated. Approval of the proposal shown in the Plan does not confer any authority for the actual construction of the road. That is a separate matter which will only arise for decision at such time as a specific road scheme is prepared and submitted to the Ministry of Transport and Civil Aviation. The Minister is informed that there is no prospect of such a scheme being authorised at an early date; in any case it is made clear in the programming proposals, which are an integral part of the Plan, that it is not

intended to make a start on construction of the road before the second period of the Plan, i.e. not until at least five years from now. Approval of the proposed route as part of the Plan does not therefore carry with it any threat of early or irrevocable action.

"On the other hand, if the route is not left in the approved Plan, there is the risk that development might be carried out within the next few years which would seriously prejudice construction of the road, and perhaps make it impossible to achieve without substantially greater disturbance. This is a risk which, in the circumstances, the Minister considers that it would be both imprudent and unreasonable to take.

"The practical effect of approval is therefore to enable the line of the road to be safeguarded during the next five years, at the end of which the statutory review of the Plan will be due to take place. There will then be opportunity for the matter to be considered further before any final decision is taken on a scheme for road construction.

"Meanwhile the Minister will look to the County Council to arrange for the collection and study of current traffic statistics in the light of which the case for the proposed spine relief road may be examined afresh, including any further proposal for extension southwards of the route shown in the Plan, so that the whole question may be dealt with at one and the same time.

"In this connection, he also invites the County Council to give further consideration to the siting of the bus station. He has decided that the proposal to establish a bus station on the site between Christ's and Emmanuel Colleges should be deleted from the Plan. In doing so he has had in mind the probable effect of the noise and movement of traffic on the two colleges, and the doubts which have been expressed about the adequacy of the site for the size of the station which would be needed. He has come to the conclusion that the siting of the bus station should be a proposal forming part of whatever proposals may be put forward for the completion of the spine relief road should it ultimately be decided to construct the road. If in the event it is decided not to construct the road the siting of the bus station must be reconsidered in the light of that decision.

"Objections were raised to the proposed redevelopment of part of the central area for shopping and office purposes which would also incorporate New Guildhall Street. This proposal has been criticised on the ground that it would bring more traffic into the central area, thus aggravating the problem of traffic congestion which the spine relief and other proposals in the Plan are designed to overcome. While the Minister agrees that the risk of this happening cannot be disregarded, he considers it should be possible to safeguard the position in the working out of detailed redevelopment proposals for the area as a whole, and he will have particular regard to this aspect when such proposals are in due course submitted to him for approval. On the question of principle, he is satisfied that the area needs to be redeveloped comprehensively and that it is well placed for the purposes proposed. He thinks it very desirable for provision to be made for some expansion of shopping and office activities, which

cannot be expected to stand still even though no large increase in the size of Cambridge is contemplated under the Plan: and that account should be taken of the possible need for the resiting of existing businesses which are cramped and unable to expand where they are. The Minister hopes that proposals for the general layout of this area will be prepared at an early date so that the erection of the multi-storey garage previously referred to will not be held up."

\* \* \*

In compliance with the Minister's request, the planning authority has now prepared a layout for the New Guildhall Street scheme which will be submitted as an amendment to the Development Plan. Though this project has already been approved in principle, its details will be open to objection at a further public inquiry, and may be modified in the light of such objections. Any objections to the compulsory purchase of part of the site by the Cambridge City Council will be heard at the same inquiry.

The planning authority has also arranged, in conformity with the Minister's requirements, for a comprehensive and up-to-date census of the traffic in the central area, with a view to presenting concrete proposals for the spine relief road (including the relocation of the bus station) when the first review of its Development Plan falls due. Such a review must be made every five years, so that the Plan may be adjusted to changes in economic conditions, Government policies and social needs. At each review the planning authority also draws up a programme of action for the ensuing five years. Among the items which will certainly be given high priority in Cambridge during this second phase will be the provision of the two large car parks to the east and north-east of the city centre - probably on King Street and Portugal Street. But the exact location and form of these car parks (and of the new bus station) will have to be considered in conjunction with the final alignment of the spine relief road, since all these projects are interdependent parts of a comprehensive scheme for the relief of traffic congestion in the city centre.

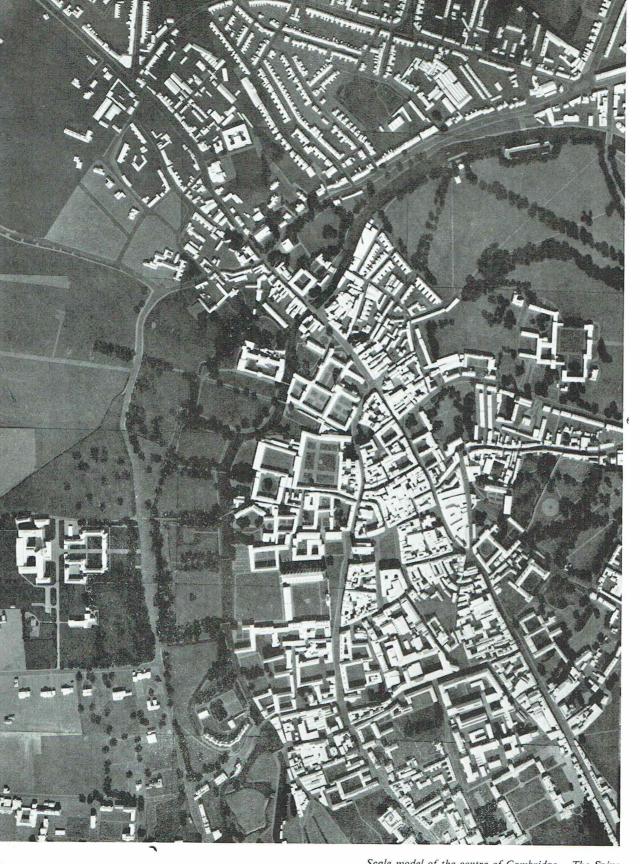
Other items to be given particular attention at the first review of the Cambridge Plan are the choice of the next slum areas to be cleared and the more precise assessment of commercial land needs.



Above: One way traffic in Bridge Street.

Below: Cycles in Sidney Street.

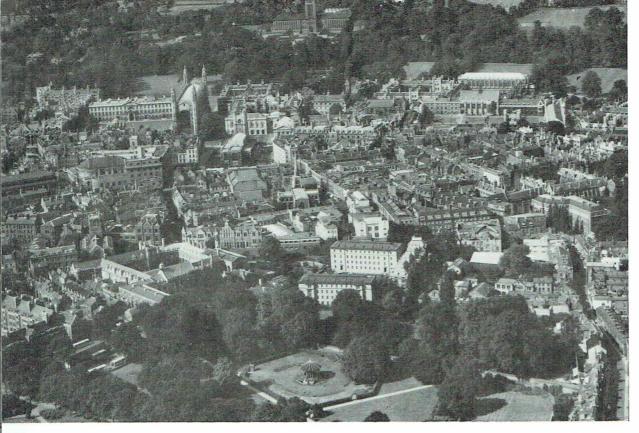




Scale model of the centre of Cambridge. The Spine Road is shown running diagonally across the page.

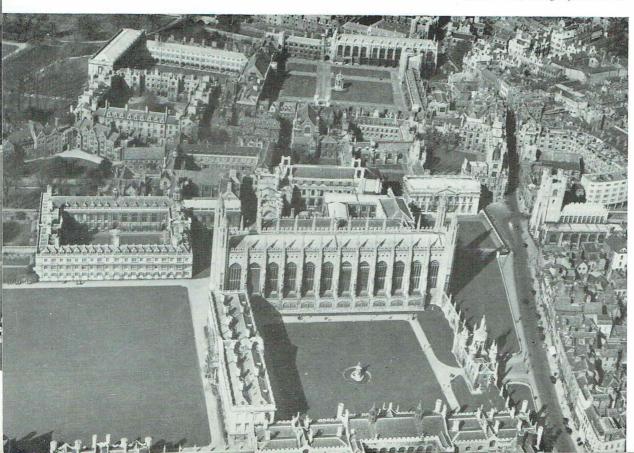


The same view showing Spine Relief Road forming a closely moulded boundary to the central area.



Above: A cross town view from the air.

Below: The colleges from the air.



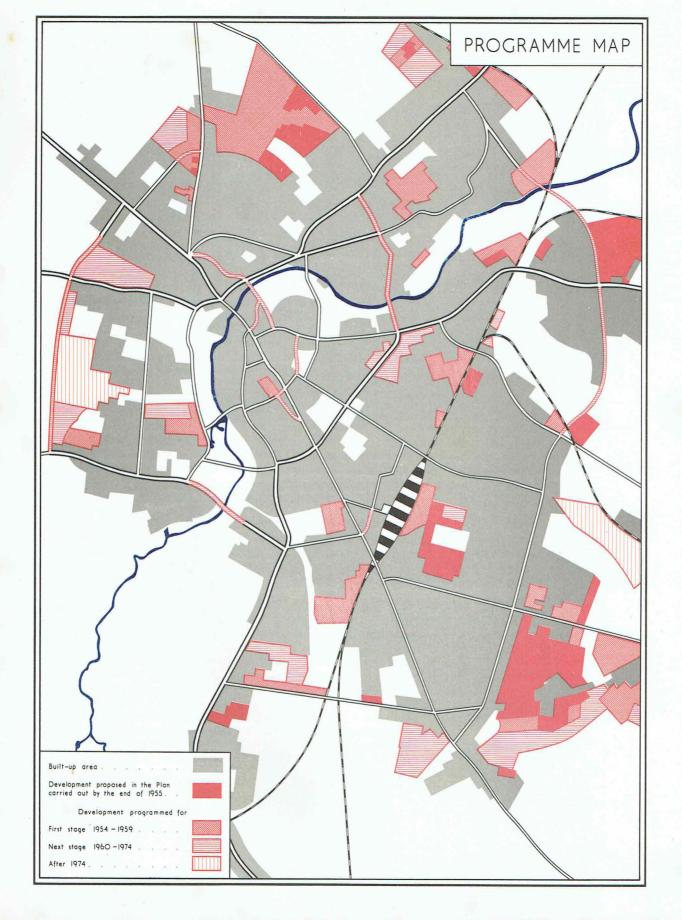
## CHAPTER IX

A development plan, as I said at the beginning, is a statement of policy and a scheme of practicable improvement. It is also a programme of action. The plan as submitted to the Minister must show not only what the planning authority hopes to get done, and why, but also when. It must include maps indicating which of the projects described in the plan are intended to be carried out in the first five years, which in the following fifteen years, and which at some later stage. These programme maps are necessarily based on the assumption that the area's normal supply of labour and materials for each type of development will be available at each stage. In practice, of course, the availability in any given period of labour and materials for such purposes as house-building and road-making is bound to depend on factors over which the planning authority has no control - things like the level of employment, the balance of trade, the Bank Rate, the Budget and the political situation. Programme maps should therefore be regarded as depicting orders of priority rather than rigid time-schedules.

All this may sound a bit nebulous to the man in the street. He is apt to expect a plan to be cut and dried - a matter of blueprints and time-tables - and to put policies and priorities in the same class as pious hopes. But now that some time has passed since the Cambridge Plan was submitted the relation between plan and reality has become easier to grasp. We can see the planning process in operation and appreciate how the programming of developments provides a pathway for the forces at work, leading from what we have to what we want.

All the land affected by the Cambridge Plan is shown in colour on the programme map overleaf. The colour diminishes in intensity with the remoteness of the programme period concerned, but the items represented by solid colour are no longer merely first-priority proposals, they are developments already in progress or completed, all in accordance with the Plan.

That is not to say, of course, that they all owe their origin to the Plan. The sites of the schools now being built, for example, had already been chosen when the Plan was prepared; for that matter, the Chesterton Bridge (still on paper) was a priority project seventy years ago. This, indeed, is one of the aspects of the Plan which the map is designed to emphasise - the continuity between what is now planned and what has gone before. Another is the relation in scale between the mass of existing development and the changes proposed for any given period. A third is the fact that programming compels the planner to strike an interim balance between costs incurred and benefits already accruing at each stage on the road towards his ultimate goal - and thereby safeguards him against the danger of continually sacrificing the present to the indefinite future.



University building since the Plan was approved has so far been confined to further progress on projects already in hand, like the Chemistry Laboratories in Lensfield Road - though the first part of the Arts Faculties building in Sidgwick Avenue may be commissioned in the near future. An interesting development, however, has been the decision to build a new women's college (New Hall) on a site on Huntingdon Road originally reserved for university or college purposes, but withdrawn at the public inquiry.

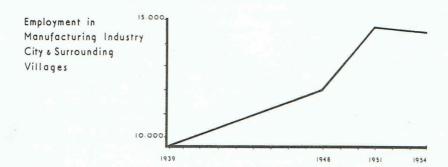
The City Council, for its part, has had to concentrate largely on house-building, and the County Council on schools; both have adhered strictly to the Plan. The City is also going ahead with the East Road redevelopment scheme and acquiring the two sites designated in the Plan for the relocation of small industries. The joint project for a new City Police and Fire Brigade headquarters at the corner of Parkside and East Road only awaits the sanction of the Home Office. The Chesterton Bridge is similarly held up by the Ministry of Transport.

Of far greater importance, however, than anything that can be shown on a map has been the progress of the planning authority's efforts to put into practice the cardinal principles of its Plan - that the growth of the city's population should be curbed by discouraging the establishment or expansion of mass-production industries and diverting the influx of immigrants to selected neighbouring villages.

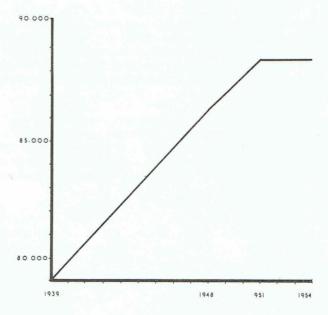
This is the real test. It is this that will determine whether Cambridge is or is not to remain predominantly a university town. If the upsurge of the city's employment capacity continued unstemmed, Cambridge as we know it would be doomed, no matter how exactly development was conforming to the Plan and its programme. And by this test the planning authority has succeeded to a truly remarkable degree.

The recent expansion of Pye Radio and associated companies has been comparable in scale with the earlier growth of the Morris and Pressed Steel factories at Cowley, and their establishment in Cambridge was fraught with the same peril as that to which Oxford has succumbed. It would, of course, have been to their advantage if as much as possible of this expansion had taken place close to the parent factories. But they have been persuaded to fall in with the The parent company has limited its demands on purpose of the Plan. Cambridge to extensions inseparable from its headquarters: for its new massproduction units it has found sites elsewhere - in Lowestoft, Southend, Glasgow and Northern Ireland. Its associated companies have built or are building factories in Linton and the small towns just beyond the Cambridgeshire boundary - Thetford, Newmarket, Haverhill and Royston - and thereby are actively helping the County to reverse the flow of population from its outer parishes to the city and its environs.

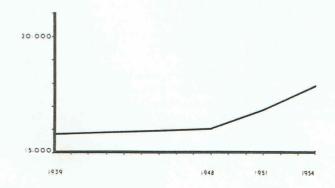
Several applications for permission to develop sites for factories and depots have had to be refused because they would have resulted in a further demand for labour. One company set up and rapidly expanded an electronic equipment business not far from the city without planning permission. In this







Population Surrounding Villages



case the Minister upheld the planning authority's objections and the firm has gone elsewhere. The Minister also, in an appeal decision, limited the area to be used for industrial purposes by an expanding chemical works on the outskirts of Cambridge.

The effect of the planning authority's efforts in this direction is strikingly illustrated by the graphs opposite. The period they cover is, of course, a short one; they suggest, however, that the upward trend of the number of jobs in manufacturing industry in Cambridge and the neighbouring villages has not only been damped down, but may actually have been reversed. In the three years up to 1951 the figure rose by about 13%. In the following three years there was a slight decline.

This achievement is also reflected in the population estimates. So far as can be ascertained, the total figure for approximately the same area rose by about 3,000 in the three years up to 1951, but by little more than 1,000 in the following three years. More significant still, the estimates for the city of Cambridge alone show an increase of over 2,000 for the years 1948-51, and appear almost static for the years 1951-54, while the corresponding figures for the rest of the area show a greater increase after 1951. Thus, the growth of Cambridge itself has been slowed down, if not halted - according to plan - and at the same time that of the surrounding villages has been accelerated - again, according to plan.

If these trends are maintained Cambridge will become a text-book example of the responsiveness of population movements to the influence of employment capacity. Here is a case where the purposeful control of population growth through a determined use of planning powers over industrial location has already produced results. The Cambridge Plan is proving itself in action.

